

**A study of the impacts of social background on the
Learning Experiences and Approaches of students in
Architectural Design Education in Pakistan.**

By

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Thesis Submitted in the Partial Fulfilment of the
Requirements for the Degree of
Doctor of Philosophy

In the
Welsh School of Architecture
Cardiff University, UK
November 2020

Abstract

This thesis explores the learning experiences and approaches of students in the school of architecture shaped up by their social class. It also explores the role played by the schools of architecture in the learning of students with diverse social attributes.

This study is conducted through an extensive theoretical framework based on literature review encompassing the concepts of cultural capital, habitus, field, institutional habitus, learning experiences and approaches. Students' social class is investigated by examining how it plays a role in their understanding of culture and how it influences their thought process, explored through the concepts of cultural capital and habitus by Bourdieu (1984). Their learning experiences are explored through the understanding of the characteristics of architectural education as a "field" (Bourdieu, 1984), and by seeing how students interact with these. Learning approaches are explored through the concept of learning approaches by Marton and Saljo (1979), and the concept of knowledge codes by Bernstein (2003 b). Whereas the role of the schools of architecture is explored through institutional habitus. Methodology of the study is based on both qualitative and quantitative tools. Data collection for quantitative study is done in 14 architecture schools in Pakistan with a total response of 1330 students. Data collection for qualitative study is done in 10 architecture schools in Pakistan through semi-structure interviews with 44 students.

The findings suggest that students' social class has a profound impact on their learning experiences and approaches. Students with high cultural capital and cultivated habitus are found to have a positive learning experiences in the schools of architecture. They adopt deep learning approaches, whereas most students with low cultural capital and oblivious habitus adopt surface learning approaches. Quality of early education dictated by social class in Pakistan is the biggest factor shaping learning experiences and approaches. Moreover, architecture schools that practice social inclusion and critical pedagogy are creating a constructive learning environment for students.

Dedication

My Mother and my Daughter

In a society where a girl's education is considered secondary to her marriage, my mother always stood beside me, supporting my ambitions. I promise to extend the same support to my daughter *Anaya* in her choices of life. She has been my strength in this difficult journey, as her love keeps me sane.

Acknowledgements

During my doctoral journey at WSA, I have learned a great deal through my interactions with an inspiring group of students and educators, I offer my sincere thanks to all of them. I am particularly grateful to Dr. Andrew Roberts. His guidance, encouragement, appreciation, and very constructive criticism of my work have enabled me to complete this challenging task. Being able to work under his supervision and to learn from his research expertise has been extremely valuable. I am thankful to Dr. Shibu Raman for his guidance and for providing his unique perspective, especially concerning the context of architectural education in Pakistan.

I am also profoundly thankful for the opportunity to work with Dr. Federico Wulff as part of the MA AD team. I have learned a great deal from him, as well as Dr. Marie Davidova, and Dr. Giorgio Talocci. Working with this team has not only trained me to sustain and grow in the tough working environment of academics. But it has also tremendously broadened my vision of research in Architecture, with many research inspirations for me to pursue in the future.

I would like to acknowledge the financial support by UET Lahore, under the Faculty Development Programme. Because of this, I was able to embark on this amazing journey of learning and self-discovery through a Ph.D.

Finally, I would like to thank all the awesome men in my life. My husband always has my back despite my mood swings caused by Ph.D. work stress. My father whose kindness for me knows no limits, and my brothers for their unconditional support in life.

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CHAPTER ONE
Introduction

1 Introduction

1.1 Introduction to Thesis

The impact of social background on education is one of the main fields of investigation in sociology. Up to now, it has been primarily investigated in terms of social class inequality, drawing on Pierre Bourdieu's theory of cultural reproduction (Bourdieu 1977). The field has produced a significant amount of research into different aspects of education, in pursuit of fairness, impartiality, and equity in education (Griffiths 1998). In architectural education, social inequality is investigated by observing teaching practices and applying Bourdieu's notions to comprehend these practices (Stevens 2002, Webster 2005).

Defined from the learner's perspective, learning is the qualitative change in the individual's conceptualisation and imagination of specific topics in a global context (Ramsden 1988). The learning experience is an indispensable aspect of this. This is the experience imposed by the context, in which the learner possesses a primarily passive role. Learning *approaches* are the actions taken by the learner to comprehend certain learning tasks in a specific learning context. In their consideration of how students deal with knowledge, Marton and Saljo (1976) propose that approaches to learning may be 'deep' or 'surface'. Bernstein (1971) categorises learning approaches using a detailed structure of teaching pedagogy and teacher-learner relations and collection and integration codes. The 'knower structure' of Maton (2013) indicates whether learners use the knowledge they gain over time or if they rely solely on the knowledge provided in school, categorising them as either 'hierarchical' or 'horizontal' knowers.

In this research, students' social background is explored through Bourdieu's lens, with an investigation of their cultural capital (that is, their familiarity with the dominant culture of their society, which has been identified to have a substantial impact on education credentials; DiMaggio 1982, Brown 1995, Sullivan 2001, Jaeger 2011). Social background is also investigated through students' habitus; that is, their ingrained personality dispositions, which is sometimes identified as the physical embodiment of cultural capital (Harker 1984, Bland 2004). This research further links students' cultural capital and habitus to their learning experiences and approaches, as indicated by their learning path in the architectural design studio, based on the theoretical framework of Marton and Saljo, Bernstein, and Maton. The impact of social background on education has been explored

widely – both in early education (Dumais 2006) and some areas of higher education, usually focusing on subject choice (Noble & Davies 2009, Thomas 2002, Hutchings and Archer 2001, Reay et al. 2005). However, there has been very little research in this area investigating architectural education. There have been investigations of learning approaches in general education (Marton & Saljo 1976) and architectural education (Iyer 2018), but none have taken into account students' social background. In addition, no research has been conducted in Pakistan on inequality in any area of higher education.

The initial part of this thesis develops a global picture of social inequality in education in general and in architectural education in particular, building the theoretical framework for the study (Chapter 2-4). This work is intended to fill the research gap in architectural education in Pakistan, with a pilot study (Chapter 5) and the main study (Chapter 6-11). The pilot study explored the 'impact of social background on students' learning in architectural education' from teachers' points of view, and it identified that students from different social backgrounds bring different learning experiences, with students from less privileged socio-economic backgrounds having more difficult paths to success (Iqbal & Roberts 2019). The main study considers this issue from the perspective of the students, with a detailed cross-sectional analysis of 14 architecture schools in Pakistan.

1.2 Motivation

The motivation for this thesis is the promotion of social inclusion and the provision of a balanced and judicious learning environment for students from all socio-economic backgrounds in the context of architectural education in Pakistan. Enabling students to learn and train as architects, without suffering bias or other difficulties due to their social upbringing.

1.3 Background

The context and requirements of this study comprise several factors. Pakistan, an underdeveloped country, is determined to accelerate its economic growth and reach the pace of the rapidly developing economies of the region. For this reason, there is a huge demand for trained professionals with a holistic view of the world. Architecture is a profession that creates the physical outlook of a society and is thus one of the most important in a developing country. As a result, the newly trained professionals in this field must be sensitive to issues of social and cultural inclusion. As a result of the demand for

professionals, there has been an influx of architecture schools in Pakistan in the past three decades. In 1990, there were just four fully-fledged schools of architecture in Pakistan. Today, there are 20, with many more on the path to receiving accreditation.

Nevertheless, the critical question remains as to how these schools are performing in terms of providing quality education to learners from different social strata. Having been a teacher at one of the oldest architecture schools in Pakistan for over eight years, the researcher has witnessed students struggle to comprehend the concepts of architectural learning. Coming from underprivileged socio-economic backgrounds, their past lives and educational experiences have simply not prepared them for the challenges of architecture education. Therefore, it is essential to investigate the problems these students face in the context of the schools of architecture and to consider how their experiences can be improved. Consequently, this study aims at widening the access to architectural education for students from different social classes.

1.4 Research gap and contribution to knowledge

No single study in Pakistan has explored social inequality in higher education on both the levels of pedagogic practice and learning experiences. Globally, research into social inequality in architecture has either focused on a single aspect of it (Webster 2005, Cuff 1992) or been based on writers' observations and experiences, rather than empirical data (Dutton 1991, Stevens 2002). In addition, while studies have considered learning approaches and experiences in architecture, focusing on how students develop these throughout their years of learning (Iyer 2018), there has been no research of this in relation to the social background to identify the impact of social inequality. This research gap is explored further in the following chapters, where the concepts are discussed, and it is summarised in Chapter 6 in relation to the research framework and methodology.

To understand the learning path through the school of architecture, this study explores students' social background and education, seeking to explain the learning experiences and approaches through data. The pilot study (discussed in Chapter 5) highlights the importance of understanding students' learning in architectural education in relation to their social upbringing. In this way, this study differs from any other work conducted in this subject area and it is expected to add novel insights to the fields of sociology and architectural education.

1.5 Hypothesis

The hypothesis for this research is as follows:

Students belonging to different socio-economic classes possess different quantities of cultural capital and habitus, which strongly influence their learning experiences, approaches, and chances of success in the schools of architecture in Pakistan.

The factors that inform this hypothesis are discussed in detail in Chapter 6 (section 6.9)

1.6 Research aim

To fill the research gap described above, this study is intended to produce insights into architectural learning experiences and approaches. In this way, the work will identify how being raised with a particular social status creates certain personality dispositions that affect students' understanding of architecture and their attitude towards learning the subject.

1.7 Research objectives

The research objectives are as follows:

- To identify variations in the dispositions of students in terms of different social attributes.
- To comprehend the practice of architectural education in the context of Pakistan and the role of social class.
- To understand the variation in students' experiences of architectural learning in relation to differences in social background.
- To understand how students' personality dispositions, develop as a result of their social upbringing, as well as the impact of this on their learning approaches in the architectural studio

1.8 Methodology

The methodology of this thesis is derived from the research objectives cited above. The underlying ideas of these objectives were explored in the literature for two purposes: first, to deepen understanding of the ideas, and second, to investigate the different methods used in previous studies to explore these ideas. Based upon these findings, a detailed research framework was developed for the study to dictate the techniques for data collection and analysis. The relationships between the research objectives and the literature and data collection and analysis techniques are explained in Figure 1-1.

The first objective concerns the variation in students' personality dispositions, as shaped by their social backgrounds. The third and fourth objectives explore the links between this variation and the students' learning experiences and approaches. The second objective is to identify the role played by schools in this relationship through their distinct practices of architectural education provision.

The role of social background was the first aspect to be explored. Numerous sociologists have proposed theories in this area, some of which are explored in Chapter 2. The most appropriate notion for the current study was deemed to be the Bourdieu theory of cultural reproduction (Bourdieu 1984). This theory considers the impact of social background through concepts of cultural capital and habitus (sections 2.9.3 & 2.10). The data collection for studies in this area have involved both quantitative and qualitative means, respectively. This current study also employed these methods of data collection.

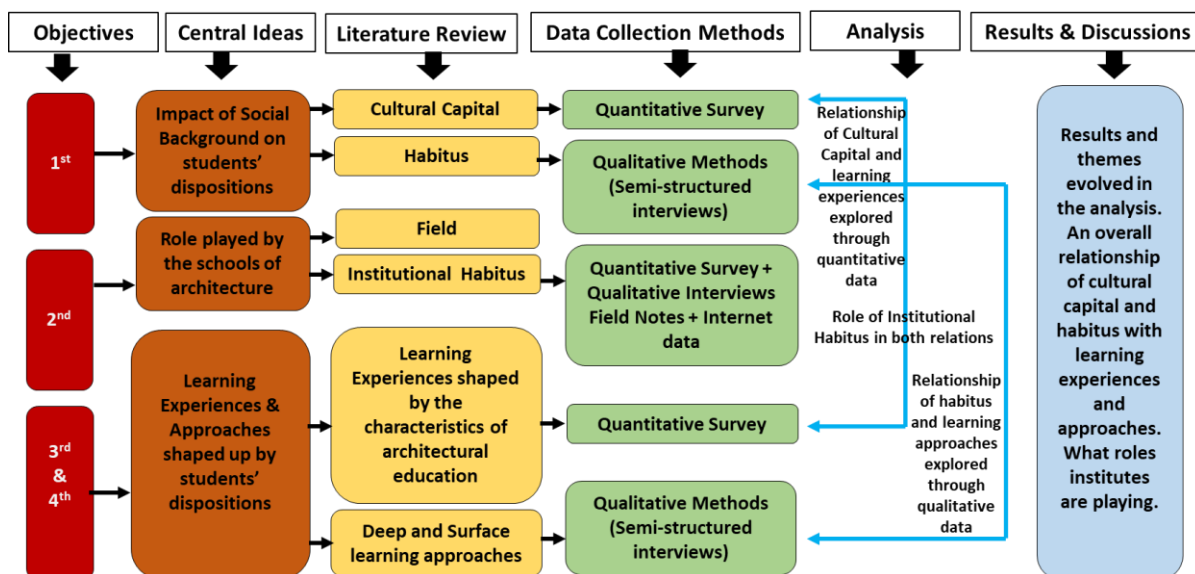


Figure 1-1: Methodology for the study and relation to objectives

The role of architectural education was the second factor to be explored. Bourdieu's concepts of field and institutional habitus provide the framework for this exploration (section 2.16.7). The explanation of the field of architecture education in the global context is based on the findings of a detailed literature review (Chapter 4). This explanation explores institutional habitus by investigating how architecture schools in Pakistan practise different aspects of architectural education. Data collection for this exploration was conducted using four sources, as explained in Chapter 6 (section 6.16).

The explanation of the field of architecture education provides the foundation for understanding the learning experiences and approaches of students in the school, thus

meeting the third and fourth objectives. Previous studies have used quantitative surveys to collect data on learning experiences, and a similar method was used for this study. Learning approaches have previously been explored in the literature in terms of the concepts of 'deep' and 'surface' learning approaches (Marton & Saljo 1976) and knowledge codes (Bernstein 1971). A framework based on both of these approaches was used for the current study, with the limitations and benefits of each detailed in Chapter 3 (section Relationship of Social Class to Learning Approaches and Codes). Previous studies have collected data on learning approaches using qualitative methods, and a similar technique was chosen for this study.

The analysis for this study was conducted in three stages. The first two stages were defined by the data collection techniques. In the first stage, the relationship between cultural capital and learning experiences was explored, with both measured by quantitative data. In the second stage, there was an exploration of the relationship between habitus and learning approaches, in the context of cultural capital, using data gathered from qualitative interviews. The role of institutional habitus was explored in both stages of the analysis. In the final stage, the themes emerging from the first two stages were explored to reach the final results.

The details of the methodology and framework, based on the literature review, are presented in Chapter 6.

1.9 Thesis structure

Figure 1-2 explains the structure of the thesis and how it is linked to the objectives of the study.

Chapter 2 – Social inequality in education. This chapter presents the literature review on inequality in contemporary education research, noting the different social theories that have been used as frameworks for such research, including the model most relevant for use in this study.

Chapter 3 – Learning theories and education inequality. This chapter discusses the learning theories and how they illuminate social disparity. Various concepts of learning experience and approaches were investigated to establish the research gap and linking these theories to existing findings on educational inequality.

Chapter 4 – Social inequality in architectural education. With a detailed literature review, this chapter explores different aspects of architectural education and discusses how they are affected by social inequality.

Chapter 5 – Social inequality and architectural education in Pakistan. This chapter begins with a detailed literature review on educational inequality in Pakistan that explores the problem in the context of early schooling and policy. It briefly discusses the history of architectural education in Pakistan. Finally, it reports the pilot study conducted in four architecture schools in Pakistan, which comprised qualitative interviews with teachers to explore their perceptions of the impact of social background on students' learning approaches. A hypothesis for the main study is presented at the end of this chapter.

Chapter 6 – Research framework and methodology. Based on the relevant theories discussed in previous chapters, a theoretical framework was developed for the proposed data collection and analysis. This chapter provides details of the data collection process employed in 14 architecture schools in Pakistan, including the use of a questionnaire survey and semi-structured interviews.

Chapter 7 – Investigating institutional habitus. Using the data collected from questionnaire surveys and the websites of the schools under study, the institutional habitus of these schools was explored and categorised for further analysis, providing an overview of the current status of architectural education in Pakistan and the learning environment of its students

Chapter 8 – Investigating the role of cultural capital. A detailed analysis of the data collected through the questionnaire survey was conducted to investigate and categorise the students' respective cultural capital. This chapter discusses the relationship between this cultural capital and the students' learning experiences, as indicated by the questionnaire survey data. The relationship between cultural capital and institutional habitus was also investigated.

Chapter 9 – Investigating the role of habitus. Using the data collected through the qualitative interviews, the students' habitus and learning approaches were investigated and categorised to explore the relationships between them and with institutional habitus.

Chapter 10 – Summarised analysis and discussion. The analyses of the quantitative and qualitative data are summarised in this chapter, identifying the themes that emerge on the

relationships between cultural capital and habitus and between learning experiences and approaches and institutional habitus.

Chapter 11 – Conclusion, implications, and further study. Conclusions are presented in this chapter, drawn from the discussions in the previous chapter, alongside an explanation of their implications and suggestions for future directions of study.

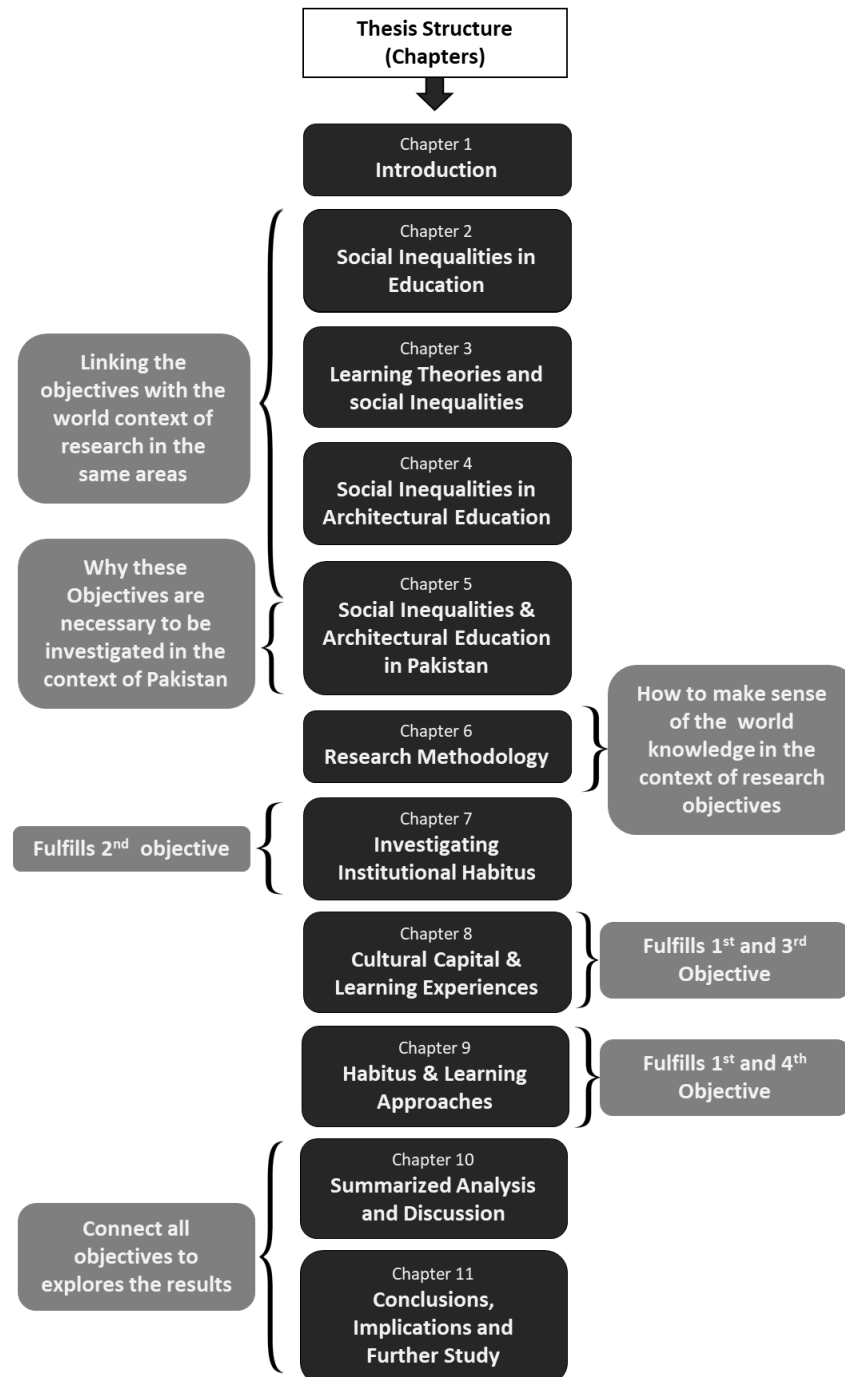


Figure 1-2: Thesis structure and its relation to the objectives

1.10 Scope of the study

The scope of the study is intended to reveal how students learn design in an architectural studio and the relationship between this and their social class. The research focuses on the time that students spend in the school, with design studio learning being the most crucial aspect. This study investigates whether students from different social backgrounds might perceive architectural education differently and adopt different individual learning approaches, what methods they may adopt to ensure their success in architectural learning, how their choice to become an architect is affected by social upbringing, and how this affects the time spent in the school. This study is not concerned solely with the views and experiences of individuals; instead, it seeks to understand the lens through which individuals view the world.

1.11 Philosophical perspective

The ontological position of the researcher is constructivist, and the epistemological position is interpretivist. These positions seek to understand the world of human experiences and tend to rely upon participants' views of the situation under study. In this study, the students' perspectives were explored to reveal the variations in their respective learning experiences and approaches in relation to their social backgrounds. The philosophical position is further explored in detail in Chapter 6 (section 6.8).

1.12 Conclusion

This chapter has introduced the study, its aims, and its objectives. It also discusses the structure of the dissertation. Based on the aims and objectives of the study, Figure 1-3 identifies the parameters for the knowledge mapping of all the relevant concepts. These parameters are as follows: research on the impact of social background, inequality in education, learning experiences and approaches, architectural education, inequality in education in Pakistan, and inequality in architectural education in Pakistan. The field between the set parameters is where the concepts under discussion in the literature (Chapters 2 to 4) and in the pilot study (Chapter 5) are mapped to identify their relevance to the study. This process produced a series of images with overlapped concepts. These maps provide an overview of all the relevant research to illustrate how it corresponds and forms the overall picture. It also highlights the research gap and the scope of the study, as described in the methodology chapter (Chapter 6). It should be noted here that this figure

– and the others based on it and presented in the following chapters – are concepts maps and not research models.

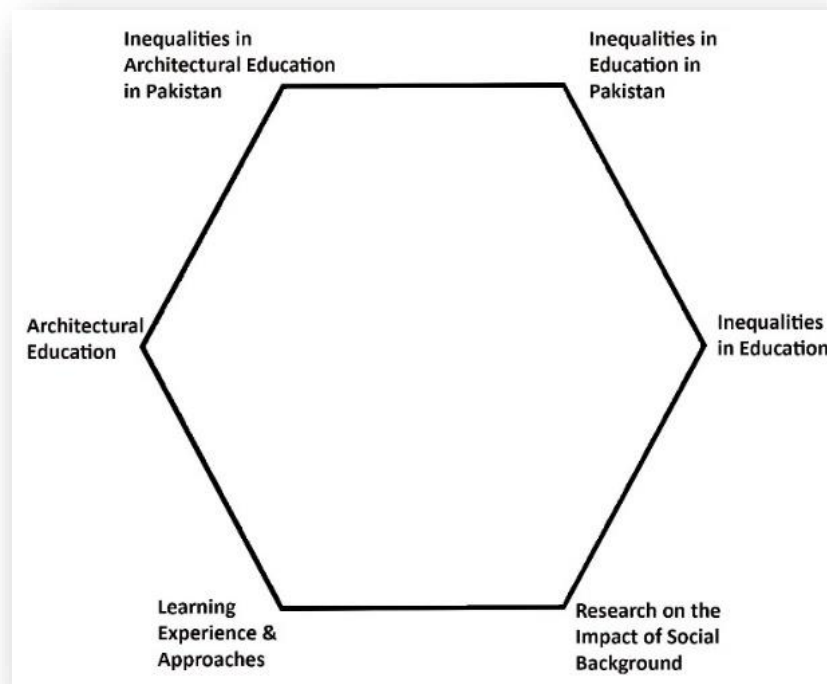


Figure 1-3: Parameters for knowledge mapping

CHAPTER TWO
Social Inequality in Education

2 Social Inequality in Education

2.1 Introduction

This chapter focuses on understanding the importance of investigating social injustice in the context of education. It explores three questions, what are the different sociological theories examining the impact of social background on learning? What is the most relevant theory for the current study? Finally, how can these theories help to develop a theoretical framework for this study? Figure 2 1 explains the structure of the chapter by explaining the different steps involved to find the right theoretical framework. These steps are discussed one by one in this chapter, and a conclusion is provided in Figure 2 6, which identifies the most relevant concepts for the study.

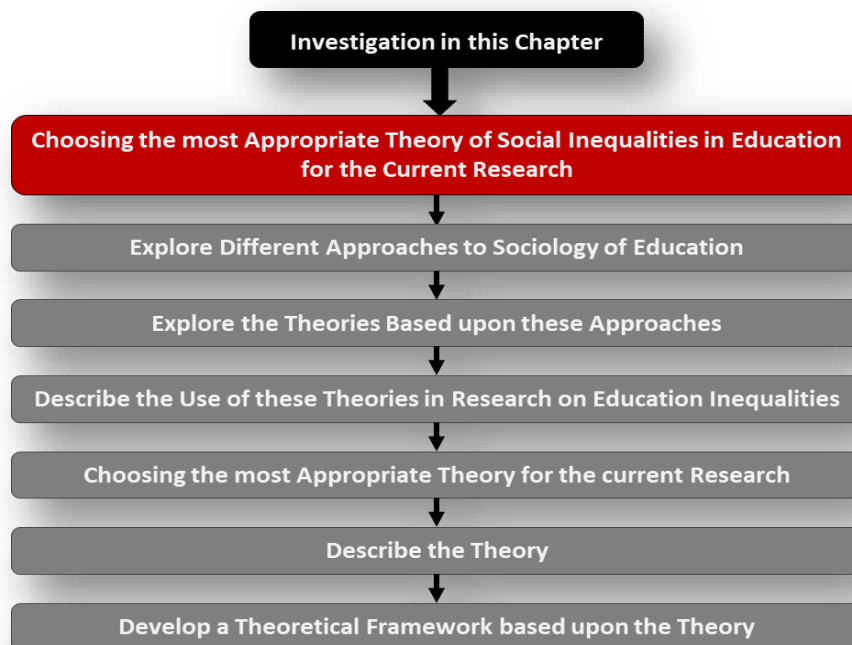


Figure 2-1: Concepts discussed in this chapter

2.2 Importance of investigating social inequalities in education

It is crucial to question why one should care about inequalities in education before digging deep into this research topic. According to some social scientists, the differences in education are desirable, as it is one of the needed qualities of education to produce a range of outputs to meet societal requirements (Gutmann & Ben-Porath, 2014). However, the problem arises when the differences are always based on social inequality, meaning a certain group of people is always bound to succeed or fail in education based

on their social class. The injustice of 'letting some people succeed in education based on social ties, cultural experiences, and their economic resources is a dilemma that is often unacknowledged in society (Wacquant, 1998). This ensures the continuation of social stratification for generations. That is why investigating the inequalities in education is very important and necessary for stepping towards social justice in any society. As McGregor (2019) identified, any discussion encompassing educational inequality should be located within the broader debates on social justice. There are many aspects of social inequalities in education, this can be based on social class, gender, ethnicity, or cast. This study is only focused on inequality based on social class.

2.3 Defining the social class

The first task in the investigation of social inequality in education based on class is to define the social class, as this forms the base for such inquiries. Despite being one of the most widely used concepts in modern sociology and social sciences, there is little agreement on the meaning or exact use of the social class. It is often defined as a group of people sharing similar experiences and social networks (Jackman, 1979). By the mid-20th century, it was agreed by most sociologists that a more structural approach is needed to the study of inequality and achievements; the social class provides this structure (Parcel, 1992). It is an essential variable in understanding how resources are distributed and who has access to them (Acker, 2006). Social class is usually common with the socio-economic class in everyday practices, but literature defines the two in different ways. Social class refers to an individuals' comparatively stable socio-economic background and the socio-economic class identifies the current social and economic situation of an individual (S. Jones & Vagle, 2013; Ostrove & Cole, 2003). For this reason, both terms are used in the literature depending upon the context. The long-standing impacts of the socio-economic background have been mostly identified as social background and social class in the research. In this study, social background and social class are used for the same meaning.

The most common division of social class is upper, middle, and lower class; however, each society has its own set of complex class system. The BBC lab UK conducted a survey in 2013, commonly known as the Great British Class Survey, and the results divided British society into seven classes (BBC, 2015). These are Elite, established middle class, technical middle class, new affluent workers, traditional working class, emergent services workers,

and precariat. In the US, online surveys divide the society into six classes (Gilbert 2017), including, upper class, new money, middle class, working class, working poor, poverty level. These two examples show that current societies have become too complicated to be divided into just three groups of social classes. In Pakistan, most literature uses the conventional system of the upper, middle, and lower class to make sense of social practices (Gazdar, 2007; Durr-e-Nayab, 2011; Ghani, 2014). Durr-e-Nayab (2011) has provided a detailed description of classes in Pakistan based on five indicators including income, education, housing, occupation, and lifestyle. Data for these indicators are taken from Pakistan social and living measurement system (PSLM). Though the classes are divided into the three main classes, she has made a further effort to classify these into seven categories with defining factors. The current study used the three main categories of classes, identified in Table 2.1.

Class	Further Categories	Defining Characters	Proportion (%)	
Lower	Lower Lower	Deprived	41.9	80.8
	Middle Lower	Aspirants	23.0	
	Upper Lower	Potential Climbers	15.9	
Middle	Lower Middle	Fledging Middle Class	8.5	12.8
	Middle Middle	Hardcore Middle Class	4.3	
Upper	Upper Middle	Elite Class	6.0	6.4
	Upper	Privileged	0.4	

Table 2.1: Class divide in Pakistan adapted from Durr-e-Nayab, 2011.

2.4 Sociology of education

To make sense of the social theories of inequality in education, it is essential to comprehend the broader spectrum of the sociology of education. Sociology of education is often defined as the study of the educational structure, processes, and practices from a sociological perspective (Musgrave, 2017). This usually works by applying common sociological theories and methods to educational issues. The four significant theories identified by sociologists in the sociology of education are functionalism, conflict theory, critical theory, and interpretivism (Pope, 1975; Kellner, 2003; O' Donoghue, 2006; Collins 2008). Historically, the first investigation into the sociology of education was based on the "Functionalist Approach" with Emile Durkheim being the most prominent advocate

of this notion (Thompson, 2003). Functionalism is based on the concept that education plays a crucial role in training students to become members of society (Pope, 1975). Above all functionalists are concerned with maintaining the social order, and they view education as a way of managing the equilibrium in society. Also, they take a macro lens to education by studying groups and structures rather than individuals. (Welch, 1985). Moreover, functionalism relies hugely on the concept of meritocracy, meaning that if one works hard, one will succeed (Brown & Tannock, 2009). It is criticised for its blind faith in meritocracy, which is often at odds with the lived realities of unequal opportunities and discrimination. In contrast to functionalism, the remaining three theories are based on social injustice.

Second is conflict theory, which has its roots in the Marxist approach of the social hierarchy of the oppressed and the oppressor. It sees socio-economic status as the primary determinant of social outcomes and is not focused on other social factors such as gender, race, sexual orientation, etc. It rests on a class-based analysis of the social issues; Paulo Freire is one of the earliest sociologists who discusses the notion of oppressed and oppressor and its role in education. Followed by Pierre Bourdieu, who provided a detailed theoretical framework for how social background plays a role in defining school success. Conflict theory is the basis for a significant amount of research in the sociology of education.

The third is an expansion of conflict theory, identified in the literature as critical theory. It is based on the belief that objectivity is impossible when analyzing social conflict because everyone experiences society from a different perspective (Rexhepi & Torres, 2011). The most significant difference between the conflict and critical theory is that the critical theory is also concerned with how other identities can oppress individuals besides the social class. Fourth is Interpretivism, it is different from conflict and critical theory as it focuses on micro-interactions and is not based on any macro perspectives. This is focused on studying individuals in daily life and the meanings it creates. In education, interpretivists critique functionalists and sometimes critical theorists for entering the education scenarios with pre-conceived notions. Interpretivists investigate the specific cultures in each school Instead of offering broad theories and they focus on reading the world as a social text (Potrac, Jones & Nelson, 2014).

2.5 Theories on social class and inequality

Since the start of the 20th century, many people got interested in the idea of social stratification in society. Karl Marx is the first person in history to bring the concept of social class into the spotlight. According to him, the defining feature of a social class is the shared relationship of its members to the means of production, land, and industrial and financial capital (Marx, 2000). He explained class not just as a theoretical concept or social construct but as the defining factor of the capitalist system. According to Marxist theory, one's place in society is based on one's relation to the means of production. He divided the society into three classes, the ruling class or bourgeoisie that controls the means of production, the working-class or proletariat that earns money by working, and the middle class or petit bourgeoisie (Craib, 2002). He also identified that the social system was reinforced by the supremacy of ruling class ideas and believes (Heywood, 1994). The ruling class transfers the wealth or economic capital to their next generation in contrast to the working class, maintaining the inequality for generations. Also, as the ruling class continues to grow their wealth through capital investment and inheritance, their power in society increases and economic power leads the way to social power (Bendix, 1974).

Max Weber introduced a different and more elaborated concept; he was focused on the rationalised economy and how social spheres contribute to this development (Samier, 2002). He explained that social stratification is not based only on the ownership of capital, instead, he gave a three-component theory of stratification (Weber, 2013). First is the class that is an individual's socio-economic position, second is the prestige that is a person's social honour, and third is the power that is a person's ability to get their way, despite the opposition. Many investigators still use weber's theory, but it is not developed or evolved with time on a similar level as Marx's theories.

Antonio Gramsci, an Italian communist politician, took Marxist thoughts forward by introducing the concept of 'hegemony', the leadership or dominance of one group over others (Bates, 1975). For years Marxists wondered why the working class agrees to be dominated by the Bourgeoisies, Gramsci provided an answer for it. He discusses through the concept of hegemony that how the wealthy and ruling classes come to dominate in a capitalist society. The key development of Gramsci's theory that makes it advance the Marxist theory is the identification that the ruling class dominates not just by physical

means of power like controlling the wealth and production, but by cultural dominance (Adamson, 1983). He explains that civil society rules through false consent which is manufactured by legitimising certain practices over others through media, education, and religious institutions (Gramsci, 1971). The dominant group in society uses dominance to legitimise certain cultural practices over others, and it is not based on an open political debate but simply cultural tactics supporting certain status quo.

The ground-breaking research in social class inequality is done by the French Sociologist “Pierre Bourdieu”. Bourdieu extended the Marx concept of capital from just economic to social and cultural capital (Bourdieu, 1984). Cultural capital is a more complex system that allows much more specific analysis of the role of social class in determining success. In Bourdieu’s theories, economic capital works in a similar way as it does in the Marxist system, it is based on the concept that possessing more capital enables easy access to wealth and power. However, Marx emphasises economic capital and suggests that it influences culture, Bourdieu identifies that individuals’ cultural capital determine how much economic capital they can earn (Beasley-Murray, 2000). A further explanation of Bourdieu’s theories is provided in section 2.7 onwards.

2.6 Social theories of inequality in the educational context

Education is often perceived to be the great equaliser in society by providing a neutral ground for building lives. However, socio-economic status often defines the education credentials and the chances of success in life (Griffiths, 1998). Sociologists’ theories discussed in the previous section explain the notion of inequality in education in different ways. Marxist theory is concerned with the way the education system works, Marxists have identified that the education system meets the needs of the ruling class through transmitting their ideology and preparing “workers” for capitalism (Althusser & Blibar, 1970). The research based on Marx's theories claimed that the state keeps the bourgeoisie in power through two apparatuses. One is the Repressive State Apparatus (RSA), which includes police, army, and courts. Second is the Ideological State Apparatus (ISA), these are the institutions that help control people’s beliefs such as education, mass media, and religion (Althusser, 2001). Bowles and Gintis (2002) two famous Marxists say that the main focus of education is to equip the workers with the right attitude to work. Similarly, Weber’s theory is concerned with the education system, particularly higher education. It demonstrates that social institutions condition the education system

through succumbing rationalisation or 'bureaucratisation'. His studies are focused on the concern for the future of human freedom (Samier, 2002). He described the social injustice in education by identifying that eventually, rationalisation in the society would no longer allow individual creativity and personal values to play any significant role in social relations (Mommsen, 1990). Antonio Gramsci discussed that the fascists controlled education by eliminating the use of grammar in the educational reforms of Italy in 1923 (Gramsci, 1985, pp. 185). He claimed that through the lack of a common National language, dominant social groups could solidify their hold on elite positions in society (Ives, 2009). However, the concept of Hegemony by Gramsci is used in the literature to investigate political and media power in societies; it is not widely used in research on educational inequalities (Altheide, 1984; Laclau & Mouffe, 1985).

Another famous Marxist "Paulo Freire" used his theory extensively in educational research and urged the working class to gain a critical consciousness through education, which is compulsory for overthrowing the dominance of the Bourgeoisie (Freire, 2000). However, his more relevant idea investigating education context is "Banking Education", which means treating students as empty vessels to be filled with knowledge. He claimed that banking education socialises students to accept injustice and not question authority; he suggests critical problem-posing pedagogy instead (Shor, 1987). These concepts are extensively used in educational research regarding inclusive pedagogies and liberating education (Roberts, 1996; Tuitt, 2003).

Pierre Bourdieu argues that the working-class students often do not perform well in the schools, not because of their inability to learn; but due to the educational system that is based on the elite and middle-class culture (Bourdieu, 1984). He never claimed to be a Marxist; however, many researchers have identified him as clearly Marxist (Ferry and Renaut, 1990), or compared him with Marxism (Brubaker 1985; DiMaggio 1979; Wacquant 1993). Bourdieu's ideas are even compared with Gramsci and the concept of hegemony as he uses the word "consent" to describe symbolic domination. However, his theories are much more complex and are based on the "Cultural Reproduction Model", this model is further explained in section 2.8.

There is another theory widely used to investigate social inequality in educational contexts; the British sociologist Basil Bernstein provided a concept of language codes in the 1960s. He identified two varieties of languages used in the society called codes, these

are categorised as restricted and elaborated codes. The elaborated codes are used in educational contexts and allow people to use a range of linguistic alternatives to be creative in their expressions. In contrast, the restricted codes are used in informal situations; it lacks stylistic range and relies on the context for its meaning (Bernstein, 1964). Bernstein identified that students' ability to possess these codes depends upon their social background and it dictates their chances of success in education, these notions are codified in terms of classification and framing that is discussed in the next chapter (section 3.9.1).

2.7 Why Bourdieu?

Among the sociologists' theories discussed in the previous section, Bourdieu's concepts are found to be most relevant for the current study. To understand the reason for this, central concepts of all sociologists' theories are discussed. Marx and Weber's theories criticise the education system through an analysis of how the system works, rather than investigating the individuals' learning path. Gramsci and Freire, both Marxists, are concerned with the education policies and pedagogies rather than an individual's trajectory of learning. Bernstein's idea of code acting as a mediator between class and educational performance has been criticised as being too complicated, it also failed to produce a significant amount of research in educational inequality.

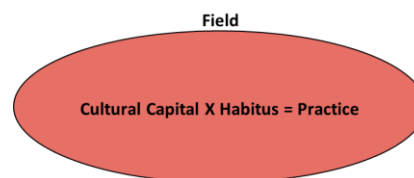
Bourdieu's work is identified in the literature as extremely relevant while studying the inequality in education (Calhoun et al., 1993; Silva & Warde, 2010). Instead of being focused on understanding the social world and the education system working on reproducing inequality, Bourdieu's work provides an opportunity to investigate the personal trajectories in the social world. It proposes a detailed framework to investigate both the materialisation of the social world inside a person that dictates their learning approaches and experiences and to understand the social world in which this person operates.

2.8 Bourdieu's theory of cultural reproduction and educational inequality

Bourdieu identified that the educational systems of contemporary societies function in the way to legitimate class inequality. He believes that possession of higher cultural capital and dominant habitus ensure success in education. Generally, lower-class pupils

do not possess these traits, so the failure of most of these pupils is inevitable, this is how social inequality is reproduced and legitimised through educational credentials (Sullivan 2002). Bourdieu also states that the major problem is that society does not even acknowledge this practice, rather it believes that individuals possessing dominant habitus are gifted and that is why perform better than others. Mills & Gale (2007) mentioned that Bourdieu's theoretical work that is informed by a critical understanding of society explores the injustice and work towards equity in education. His theory of cultural reproduction is concerned with the link between original and ultimate social class membership mediated through education. This theory introduced the concepts of cultural capital, habitus, and field (Bourdieu, 1977).

These concepts are based on the structure and agency duality, this is a notion used by many sociologists to describe the relation of individuals with the social world under the ideas of Structure-Agency "duality" (Giddens, 1984); "dualism" (Archer, 1988); and "dialogic" (Bourdieu & Wacquant, 1992). Bourdieu's work is an attempt to understand and develop a relationship between structure and agency. The essential purpose of Bourdieu's theories is to remove the dichotomy of structure and agency and discuss the "permanent internalisation of the social order in the human body" (Bourdieu, 1977). It focuses on the best way of understanding the nature of the relationship between objective factors such as social norms, social class, ethnicity, and gender that define and constrain subjective actions (Thatcher et al., 2015). These objective factors are the field and defined subjective actions as the habitus, while cultural capital is the resources that individuals possess in a field and utilise according to their habitus, and that is how practices are formed in a field (Figure 2-2).



*Figure 2-2: Relationship of field, cultural Capital, and habitus in the theory of cultural reproduction.
(Source Stevens, 2002)*

The three concepts of cultural capital, habitus, and field are interlinked with each other, so it is not possible to explain one without stating the other. For this reason, before explaining each of these concepts in detail, it is crucial to define them briefly. Cultural capital is a person's familiarity with the dominant culture in society; habitus is much more

profound; it is the inculcated personality dispositions of a person. Habitus and field are often defined together; in Bourdieu's theory, societal practices are based on a two-way relationship between actions and their objective world. Habitus determines these actions and the objective world is the field in which individuals operate (Grenfell & James, 2003). In the next section, these concepts are explained in detail.

2.9 Cultural capital as symbolic power

A person's familiarity with the dominant culture of society defines their "Cultural capital", it is the representation of a person's cultural values and includes the traits like communication skills, dressing sense, posture, and academic credentials. To understand cultural capital in more depth, it is essential first to grasp the concept of symbolic power.

2.9.1 Symbolic power

Bourdieu believes that all societies are separated among groups, these groups are in a constant struggle to further their interests. This struggle operates at many levels between classes, families, individuals, and all other sorts of collective entities. It is also evident that some groups succeed in furthering their interests more than others; they can manipulate better because they control more resources. They do not only have control in a particular moment, but they also keep control by ensuring their way of living, behaving, thinking, and acting to be classified as legitimate. This system of society ensures the division of dominant and subordinate groups (the two groups identified by Marx). Acquiring power ensures the control of resources and guarantees the further control of power, Bourdieu is concerned with this phenomenon of power and investigates through his theories that how power is exercised and what effects it generates (Bourdieu, 1991).

For Bourdieu, power is the ability to enforce a precise definition of reality that is unfavorable to others. Other than the most identifiable forms of power in society the physical and economic power, Bourdieu introduced the concept of symbolic power (Naghizadeh & Ostovar 2012). The practice to wield the symbols and thoughts, ideas, and beliefs that define reality to achieve ends is the symbolic power. Bourdieu says: *"Symbolic systems are symbolic forms, instruments for constructing reality"* (Bourdieu 1979). The field in which symbolic power operates is called the "culture", Bourdieu argues that the cultural field functions to produce, reproduce, and legitimate the class

structures and a system of discrimination, for this reason, culture is central to Bourdieu's sociological theory.

2.9.2 Cultural capital

As economic power is controlled by the possession of economic capital, symbolic power is controlled by the ownership of symbolic or cultural capital. Individuals, groups, families, and organisations compete in the economic arena to increase their wealth and hence the economic capital, similarly, they compete in the cultural arena to maximize their cultural capital.

The concept of capital is central to Bourdieu's theory and binding the notion of field and habitus, the field is the structure in which agents possess specific capital, and it shapes their habitus. Cultural capital can be identified as familiarity with the dominant culture in society, particularly the capability to comprehend and use literary language. It is primarily defined as an illustration of a person's cultural value and includes a variety of traits and behaviours such as language, preferences, academic credentials, dressing sense, and posture. These phenomena ultimately describe who a person is and where he/she is located in the greater social strata. Social class defines the possession of the cultural capital by controlling the opportunities and resources available to people, that dictate their success in a stratified society. Bourdieu claims that the education system demands the possession of cultural capital for a student to succeed. Also, it can only be possessed through recourses and exposure to the dominant culture, making it very difficult for the students of lower social class to succeed. This expectation makes the system of pedagogic transmission very inefficient for some students because they simply do not comprehend what their teachers are trying to communicate.

“Education system demands of everyone alike that they have what it does not give. This consists mainly of linguistic and cultural competence and that relationship of familiarity with the culture which can only be produced by family upbringing when it transmits the dominant culture.” (Bourdieu, 1977, p. 494)

For Bourdieu, this is predominantly apparent in the universities, as students here are more afraid of revealing the extent of their ignorance. As a result, students often find it challenging to find their place in the education system and later in society, minimising their chances of success. Hence, the education system possesses a key role in maintaining the status quo.

“... education is, in fact, one of the most effective means of perpetuating the existing social pattern, as it both provides an apparent justification for social inequalities and gives recognition to the cultural heritage, that is, to a social gift treated as a natural one.” (Bourdieu, 1974, p. 32)

Cultural capital is categorised into three forms by Bourdieu; the embodied, objectified, and institutionalised cultural capital. Embodied cultural capital includes the characteristics that are incorporated in the personality of a person, like the skills they have, their accent, dialect, and mannerism. It also contains tastes, such as music, art, and literature. Objectified cultural capital is the material belongings that have cultural significance, such as an expensive painting, or a car. Institutionalised cultural capital is the symbol of cultural competence or authority, such as education credentials and qualifications. Among the three, embodied cultural capital is the most important one because the dominant class in the society distinguishes themselves from others by how they look and behave. One needs to buy a membership in these classes through embodied cultural capital. Habitus is often referred to as embodied cultural capital.

2.10 Habitus

Habitus is the inculcated personality dispositions, and as mentioned above, often described as the physical embodiment of cultural capital. It is the scheme of thoughts and perceptions embodied in agents through past experiences, and it defines their future actions. Class-specific activities result in acquiring certain habitus (Stuij, 2015). The societal practices are inscribed as habitus in the individuals and fabricate social practice, that is why the nature of habitus is revealed through the analysis of social practice. Bourdieu developed habitus to identify the ways in which not only the body exists in the social world, but also the social world exists in the body (Nash, 1991). Diana Reay links habitus with an individual's life:

Bourdieu views the dispositions, which make up habitus, as the products of opportunities and constraints framing the individual's earlier life experiences. (Reay 2004)

Habitus defines the possibility of actions in a field; Bourdieu sees it as a generator of activities that enable individuals to develop transformative and limiting courses of action. He understands habitus as structured structures that are predisposed to act as structuring structures. On the one hand, the habitus is the outcome of social structures, more accurately of the social class. On the other hand, habitus also structures practices

and replicates social fields (Bourdieu, 1984). He argues that habitus has its importance in relation to the field and believes that the same habitus can create a unique impact in different fields, it can lead to very different practices and stances depending upon the nature of the field.

The habitus, as a system of dispositions to a certain practice, is an objective basis for regular modes of behaviour, and thus for the regularity of modes of practice, and if practices can be predictedthis is because the effect of the habitus is that agents who are equipped with it will behave in a certain way in certain circumstances. (Bourdieu, 1990b, p. 77)

Habitus act as a feedback loop between social structure (field) and personal practices, it is the link through which social order is reproduced over time. (Figure 2-3, Stevens 2002). Every person possesses subjective expectations of objective probabilities of the social world. Bourdieu explained that a person's life strategy is based upon what they think is the right balance between the skills they possess and the likeliness of success.

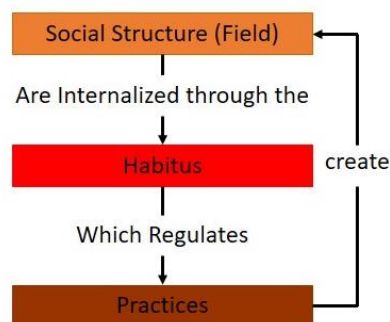


Figure 2-3: Relationship of habitus to the field (Source: Favored Circle, Stevens 2002)

In his much-celebrated work “Distinction” (1984), Bourdieu linked habitus with the concept of “taste” and claimed that those high in cultural capital while coming from higher social class possess a “taste of freedom”. Whereas those with low cultural capital possess a “taste of necessity”. Taste of freedom means high-class individuals get familiarised with cultural objects that become a part of their inherent personality dispositions enabling them to have a cultivated habitus.

Two significant factors that play the most vital role in a person's habitus are family dispositions and schooling.

The habitus acquired in the family is at the basis of the structuring of school experiences the habitus transformed by the action of the school, itself diversified, is in turn at the basis of all subsequent experiences. (Bourdieu & Wacquant, 1992, p. 134)

Bourdieu explained that no two individuals have the same histories in their lives, so they do not have the same habitus. Personal history plays a vital role in understanding one's habitus, it is permeable and reactive to situations, it is not only a character of historical dispositions but also current circumstances. It is a character of childhood experience, schooling, and socialisation with family; however, it is continuously restructured through interactions with the outside world throughout a person's life.

2.11 Cultural capital and habitus as the determinant for the inequality in education

By introducing the concepts of cultural capital and habitus; and enabling them in educational research, Bourdieu establishes the fact that social inequality is reproduced and legitimised through educational credentials. Figure 2-4 explains how cultural capital and habitus are influenced by social background and determine the chances of success in educational setup.

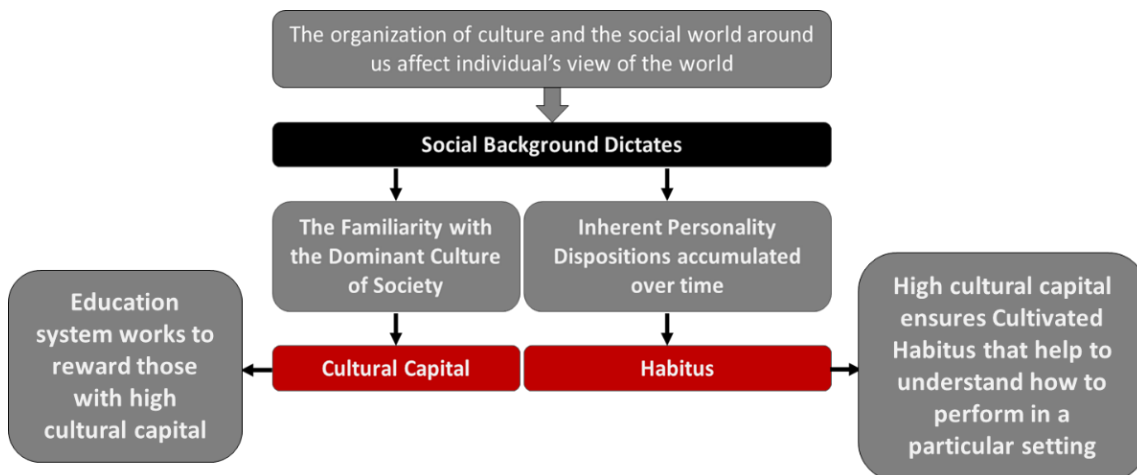


Figure 2-4: Relationship of social background to educational success

Students who enjoy secure social means through their family life possess high cultural capital and cultivated habitus. Upon entering higher education, they find the path to success easier. Because of their understanding of educational setup, they are often labeled as creative geniuses by the school (Stevens, 2002). The significance of cultural capital and habitus in research on social inequality in education makes these two notions incredibly relevant in the current study. Chapter 8 investigates the role of cultural capital in the context of this study, and chapter 9 examines the role of habitus.

2.12 Institutional habitus

The simplest definition of institutional habitus is that when the concept of habitus is used to investigate the embodied dispositions of institutes, it is identified as institutional habitus. Bourdieu engaged in the notion of habitus at both the societal and individual levels. Even though his work is more focused and empirically engaged with an individual's habitus, he provided a very detailed notion for societal and institutional characteristics playing a role. He identified that social spaces are formed through shared common views, attitudes, dispositions, and practices. He also focused on the significance of educational institutions, according to him education system is the primary institution through which class order is preserved in societies. However, Bourdieu never used the term institutional habitus. It is a concept used for the first time by McDonough (1996) under the title of organisational habitus. She argued that habitus is not a trait that exists only in individuals and families, instead it is also profoundly rooted in organisational contexts. She explained that each institute has its own habitus; that is its predispositions, scheme of perceptions, and taken-for-granted expectations.

Reay (1998) explored the same concept under the term "institutional habitus", according to her, institutional habitus can be understood as "the impact of a cultural group or social class on an individual's behaviour as it is mediated through an organisation" (Reay et al., 2001). They also emphasised that the exploration of institutional habitus must be based on the complex amalgam of structure and agency. Reay (1998) claimed that institutions possess identifiable habitus that impact and shape their catchment areas and vice versa. Reay et al. (2001) also identified that the habitus of some institutions can be more in tension with the familial habitus of non-traditional students.

A significant amount of research has found institutional habitus to have a substantial effect on collective learning expectations and behaviour of pupils in the school (Thomas, 2002); hence it is a vital tool to investigate the role institutions might play. Institutional habitus, just like individual habitus, is developed over a historical period and is often examined through the different component of practices an institution deploy. Atkinson (2011) also reflected upon the concept of institutional habitus and identifies that the concept needs to be pushed forward in research under consistent logic. Thomson (2002) discussed the critique on institutional habitus and mentioned that it can be viewed as a redundant concept to the field. However, he concluded that the idea of institutional

habitus has opened an area of research that investigates the lived experiences of institutional stratification. In the current study, both the concepts of field and institutional habitus are used for different types of investigations, as explained in section 2.14.

2.13 Field

Bourdieu described habitus as “feel for the game” when an individual just intuitively knows what to do in a particular setting, this setting is the field (Bourdieu, 1984). The field is based on a range of objective possibilities, defining the social world, habitus is how one enters this world and takes the possible social positions a field has to offer. A field is inhabited by positions, these positions can belong to an institution (such as a school, a university, higher education commissions, or an architects’ regulating body). Or they can belong to an individual or agents, for example, a student, a Head of School, a registrar, or a professor. Therefore a field exists in duality, it consists both of structured space of position and space of position-taking (Bourdieu 1993).

The field is a composition of multiple overlapping and interlocking spaces, these spaces possess numerous characters, and they are social, cultural, and material at once. Fields exist in a broader societal order and contain certain similarities and dissimilarities; they can be autonomous or dependent upon each other (Grenfell 2014). Each society is composed of different fields, and each field has its own set of positions and struggles for positions, as individuals mobilise their capital based upon their habitus to stake the claim in the field. Education is a significant subfield, and cultural capital is predominantly crucial in this field.

Fields possess unique characteristics and a part to play in the field of power. For example, the role of the field of architecture is to produce a built environment for society. The role of the field of architectural education is to provide young architects to serve the profession. Both fields do so by playing their own rules and rules imposed on them by profession; also, it produces the knowledge and disposition which shape the profession in return (Ferrare and Apple 2015).

Each field possesses its own rules identified as “Doxa”, it is the shared beliefs or popular opinion in a field, and each individual and their habitus are evaluated in the field according to these rules and opinions. Bourdieu also explained Doxa as what is taken for

granted without being questioned, and it is the most significant determinant of habitus for agents in a field (Eagleton & Bourdieu, 1992).

2.14 Investigating the context of the study

Concepts of habitus and field have been used by peers to investigate the context of social practices. Both concepts provide the framework for certain aspects of research in educational settings as explained in Figure 2-5. The field is a scheme of social positions, structured internally in terms of power relationships, and it identifies how a context is constructed in terms of laws that govern practices. So, field theory is very helpful to understand the arena of architectural education as it has developed over time through the legitimisation of practices. Chapter 4 attempts to do so through a very detailed literature review, informing the characteristics of architectural education.

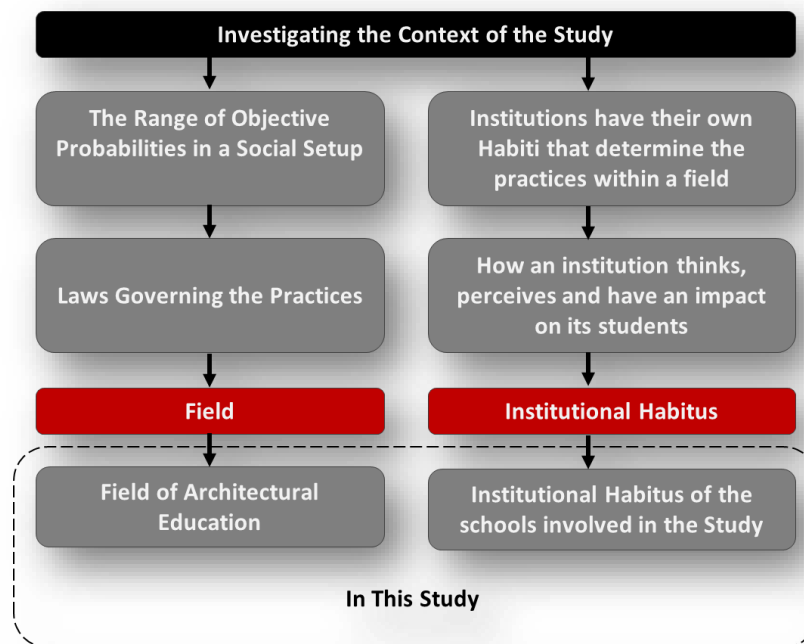


Figure 2-5: Relevance of field and institutional habitus to the study

However, when investigating architectural education context in a particular setting, field theory investigates the practice as an arena of legitimisation which is not a focus of this study. The focus of this study is to examine how different practices of architectural education in Pakistan's context impact students' learning experiences and approaches. Institutional habitus investigates the impact of the characteristics of a particular setting or institute on the people involved. So, it provides the right toolkit to investigate the practices of architectural education in Pakistan informed by the characteristics of

architectural education investigated through field theory. Chapter 7 explores the institutional habitus of schools involved in the study.

2.15 Reflexivity

Another important concept by Bourdieu that has impacted the research his concept of Reflexivity. According to Bourdieu, the agents' ability to attain knowledge of the various fields depends upon their relation to the field, called "reflexivity". It is based on knowing the game being played by agents in the field and it involves the knowledge of various rules (both written and unwritten), discourses, genres, forms of capital, and practices (Webb et al. 2002). This knowledge allows agents to make sense of what is happening around them, and to make logical decisions as to how a field or fields should be negotiated. With "reflexive sociology," Bourdieu argues if social science is to be successful as methodical innovativeness, then the biographies and conducts of social scientists in relation to their object of study must be considered as well. The social researcher must develop a critical awareness of his or her own social position in relation to both the research object and process because they occupy a place in that social world (Fries 2009).

For this reason, Bourdieu cautions social scientists to remain aware of clouding the social realities by their understanding. He believes that social scientists are prone to what he describes as "Scholastic Bias". It refers to the tendency of the social scientists to impose second-order theoretical explanations of the agent's behaviour onto the practical legitimacy they study. This notion is essential in the current study as the researcher is a teacher of architectural education in one of the schools included in the study. It is important that she remains aware of scholastic biases in the analysis and interpretation of findings.

2.16 Bourdieu's theories as a method

Bourdieu's work has inspired many after him and produced a significant amount of research exploring various aspects of social injustice in education. However, most of this research has been conducted in western societies. Some of these investigations are discussed here to identify the versatility and relevance of Bourdieu's concepts in research on inequality in education.

2.16.1 Participation in higher education

The impact of social class on the decision-making process regarding higher education is widely discussed in the literature. The literature identifies how the variations in the cultural capital of students contribute to the social class differences in the level of participation in higher education (Noble & Davies, 2009). It also provided a practical method for measuring cultural capital. It discusses the impacts of values and practices of higher education institutions on students' retention in these institutions through the concept of institutional habitus. Through an extensive study, Lynch & O'Riordan (1998) discusses the barriers experienced by low-income working-class students in accessing and succeeding in higher education. In this study, they explored the concepts of various sociologists, including Bourdieu. Inequality produced by the higher education market by exploring the ideas of social and cultural reproduction by Bourdieu is explored in the literature (Pugsley, 1998). Finally, Reay et al. (2005) provided a sophisticated account of the overlapping effects of social class ethnicity and gender in the process of choosing the higher studies institution.

2.16.2 Choice of profession

Van De Werfhorst et al. (2003) use the cultural reproduction theory to discuss the impact of family background and cultural capital on the choice of subjects in primary and secondary education. They inform that children of the professional class are more likely to choose professional fields for study. Investigators have examined how the economic barriers and the barriers of class-based culture, restrict the opportunities of higher education (Hutchings and Archer, 2001; Bathmaker et al., 2013). Ball et al. (2010) discussed that the choices of higher education are rooted in students' biographies as well as institutional habitus.

2.16.3 Role of cultural capital and habitus in educational achievements

A large amount of research has linked academic achievements with cultural capital and habitus. Research identifies how parents' cultural capital ultimately develops the cultural capital of the young generation which dictates their educational achievements (De Graaf et al., 2000; DiMaggio, 1982). By exploring the relation of cultural capital and social exclusion in education, investigators have concluded that western capitalists societies are experiencing class conflicts about education and labour markets (Brown,1995). By using

the theory of cultural capital, the literature identifies how and why background matters for achievements in higher education. It concludes with the finding that black and low socio-economic class students tend to receive less educational returns (Roscigno, & Ainsworth-Darnell, 1999; Sullivan, 2001; Jaeger, 2011)

Some studies identified the role of Habitus in academic achievements as well (Harker, 1984). The literature identifies a relation between habitus and cultural capital by recognising their role in academic achievements (Dumais, 2002; Gaddis, 2013). Dumais (2002) argued the importance of habitus in the investigations of gender roles in school success by identifying how habitus dictates the use of cultural capital by both genders. Gaddis (2013) discussed the mediating role of habitus in the relation between cultural capital and academic achievements.

2.16.4 Role of education in transforming habitus

Some studies have investigated how habitus transforms through education. The literature on this topic discussed the role of habitus while investigating the schooling experiences for students from socially disadvantaged backgrounds and identify how education transforms the habitus. It discussed in detail the barriers faced by such students and what kind of efforts make them overcome these barriers. (Bland, 2004; Horvat & Davis, 2011; Harris & Wise, 2012). Lehmann (2014) discussed the ways working-class students consolidate their habitus with the middle-class culture of academic fields. He identified this transformation process as a very complex one that inflicts many hidden injuries as students often end up having a difficult relationship with their families, friends, and peers.

2.16.5 Role of field and institutional habitus

Brosnan (2010) discussed the differences in the medical institutions by investigating their curricula, reputations, and types and levels of resources by enabling the notion of field. Ferrare & Apple (2015) discussed the pedagogic qualities of local field positions in educational contexts; they identified that Bourdieu's field theory does not go far enough to detail the ways that positions in local educational fields embody pedagogic qualities and action trajectories. Some investigators have explored the role institutions play in students' development under the concept of institutional habitus (Raey et al, 2001; Thomas 2002). Ingram (2009) discusses the role of institutional habitus while

investigating the educational success of working-class boys, she raises the questions about the interpretation of working-class culture in schools and society.

2.16.6 Cultural capital and approaches in education

Most of the research regarding inequality in education investigates educational attainment in general. However, Pitzalis & Porcu (2017) investigated how people from different social backgrounds adopt various strategies and approaches to be successful in higher education by enabling the notion of cultural capital. There is not a significant amount of research linking the social background with approaches in education and learning.

2.16.7 Theory as a method for the current research

The purpose of discussing these examples of research using Bourdieu's theories as methods is to identify the extensiveness through which these theories are used in the literature. As discussed in section 2.7, no other sociological theory has produced as an extensive amount of research as Bourdieu's theories. The relevance of these theories in this research is also identified in sections Cultural capital and habitus as the determinant for the inequality in education and Investigating the context of the study, and a detailed framework based upon these theories is developed in chapter 6.

2.17 Conclusion

This chapter discusses the importance of investigating the socio-economic inequality in education and presents the most relevant theories used historically for such investigations. Figure 2-6 maps all the concepts discussed in this chapter down to the most relevant ones. Concepts mentioned on the extreme left-hand side are the categories of concepts discussed in this chapter, these categories are the same as identified in Figure 2-1, at the beginning of the chapter.

The greyed areas in this map are the concepts that are directly relevant to this study. Starting from the conflict theory as the approach to the sociology of education, although Karl Marx's theories are not directly used in this research his notion of a stratified society based on social class is at the heart of every inquiry for the impact of social background in an educational context. The social theories by Pierre Bourdieu and their use in educational research is providing the base of the theoretical framework for this study. The use of cultural capital, habitus, institutional habitus, and field is discussed in detail in

this chapter; the first two concepts provide the framework for the investigation of the impact of social background in developing skills and personality dispositions. Moreover, the other two concepts provide the framework for investigating the context in terms of their characteristics or dominant practices (field), and how these practices are employed by the institutions involved in the study.

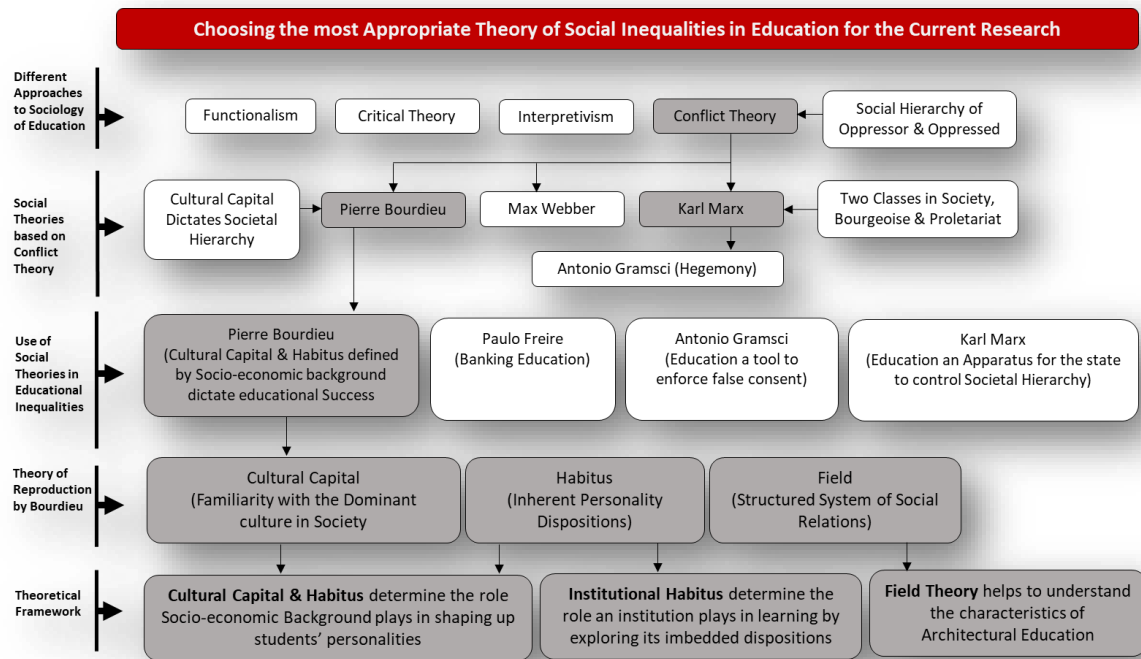


Figure 2-6: Map of the concepts discussed in this chapter down to the most relevant concepts to the current study

Figure 2-6 answers the three questions identified at the beginning of the chapter under the introduction. The first three rows explain the most relevant theories linking social background to learning, which answers the first question. After a critical analysis of all the theories discussed in this chapter, the “theory of cultural reproduction by Bourdieu” identified in the fourth row of Figure 2-6 is found to be the most suitable for this research. This identification answers the second question mentioned in the introduction. The final row of the figure explains how the concepts by Bourdieu provide a base for the formation of a theoretical framework for the study, which answers the third question.

Based on Figure 1-3, Figure 2-7 maps the research on social and educational inequality by Bourdieu and peers; Figure 2.8 identifies the research on the theory of cultural reproduction by Bourdieu to investigate the impact of students’ social background on students’ learning.

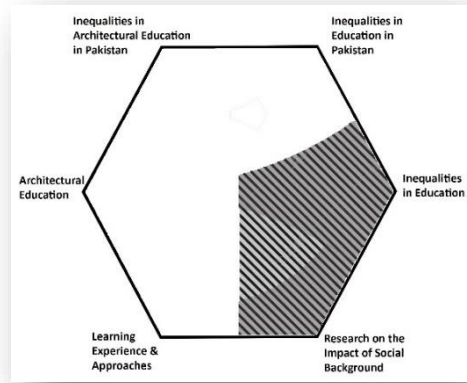
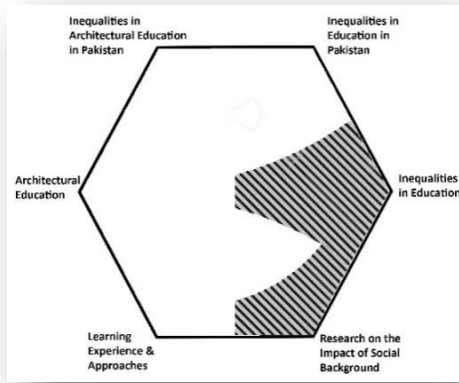


Figure 2-7: Research on social inequality in education

Figure 2-8: Research enabling Bourdieu's theories

CHAPTER THREE
Learning Theories and Social Inequality

3 Learning Theories and Social Inequality

3.1 Introduction

Students' learning experiences and approaches in the school of architecture defined by their social class are the main inquiry in this study. For this reason, it is crucial to understand the theories that explore learning experiences and approaches in education. This chapter reviews various models of learning theories compares them and identifies the most suitable model for the study at hand by combining some concepts. It explores three questions shown in Figure 3-1. Including, what are the different theories and concepts examining students' perceptions and approaches to learning? How can they provide a theoretical framework for the investigation of students learning experiences and approaches in this study? And how these concepts can relate to the social background of the students?

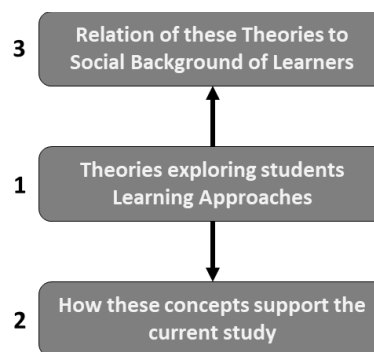


Figure 3-1: Three questions to be investigated in this chapter

3.2 Limitations of the theory of cultural reproduction

Figure 3-2 describes the concepts investigated in the previous chapter through black boxes and the ideas to be studied in this chapter through white boxes; it also defines an overall relation among these concepts. In the previous chapter, the theory of cultural reproduction by Bourdieu is identified as the most appropriate to develop the framework for the investigation of the impact of social background on learning. However, this theory is only able to serve two purposes, first is to identify how the differences of the social world are materialised in students (cultural capital and habitus), and the second is how to investigate the learning context in the school of architecture (field and institutional habitus).

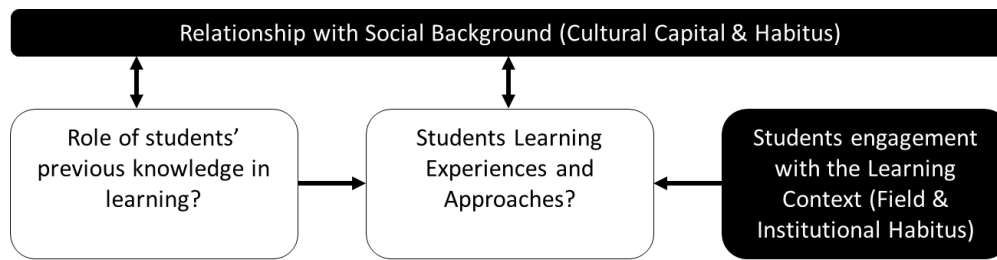


Figure 3-2: Concepts investigated in the previous chapter and to be investigated in this chapter

It does not provide a method to investigate the relation of students' personalities (created by the social world), to learning experiences and approaches. It is crucial to investigate how students use their previous learning experiences in the schools of architecture, how they engage with the learning context, and most importantly what approaches they use to learn in the school, and how these factors are related to each other. For these investigations, theories for learning experiences and approaches are investigated, and the most suitable concepts for the current research are identified.

3.3 What is learning?

The word learning comes from the old English term "lore" which means instructions, in literature this word is used to identify the traditions and knowledge on the subject. Learning is defined in research in different ways; the simplest definition is by Brockbank & McGill (2007). They explained learning as "the process of acquiring knowledge and skills, becoming aware of something, or memorising something". However, this definition is too limiting for the long-lasting impacts of learning, a much more detailed description of the term is provided by Atkinson (1996) and Lachman (1997). They defined learning as "a relatively permanent change in behaviour as a result of practice and experience"; this is the most common textbook definition of learning. However, De Houwer et al. (2013) criticised that this definition reduces learning to a mechanistic process, and as a result, the active role of learners is not acknowledged.

3.3.1 Learners' focused learning

Learner-focused learning has been the emphasis of university education in the western world since the beginning of the 20th century; it believes that education should be focused on learners and not teachers and content (Spring, 2014). Learning is described from the learners' perspective in literature as well, Biggs (1999) identified learning as conceptual change and not just behavioural change. He quoted Tyler (1949), by stating "Learning takes place through the active engagement of the students". Biggs (2011) also

claimed that students learn what they do, not what teachers do. Learning is seen as a complex process that involves mastering a lot of complicated principles (Fry et al., 2008), it is also identified as an internal development that is different for every individual (Andreou, 2006).

Historically, teaching and learning are defined as two distinct activities, but these activities tend to merge where learners are engaged in learning by their own accord (Moon, 2013). For this reason, a significant amount of literature stresses the importance of investigating learning through learners' perspectives (Iyer 2018). The role of students is the most important one in shaping up the learning, and that is why their experience and approaches possess the most value in the investigation on learning. In the current study as well, the impact of social inequality in architectural education is explored through students' points of view by looking into their experiences and approaches to learning.

3.4 Learning experience

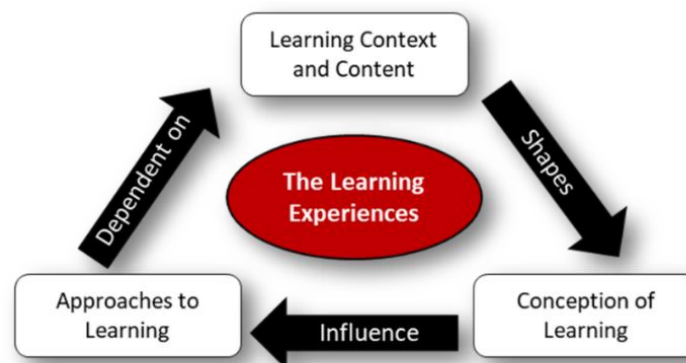


Figure 3-3: Factors shaping the learning experiences, adapted from Iyer (2018)

The learning experience is a broad term used in several ways in educational research. An exceeding amount of research has used the term to identify how learning occurs through experiences. As Moon (2004) explained, "learning is learning through experience", identifying experience as the critical factor that shapes up learning. Beaty et al. (1997) explained that students' learning experience depends upon their orientation to learning. Marton and Booth (1997) described that a learning experience is an amalgamation of the learner's different ways of experiencing knowledge. Biggs (1999) explained through the examples of different types of learners that students' learning experiences are based on their orientation and the level of engagement. Each of these examples claims that

learning depends upon the learner's perception of it. Figure 3-3 (adapted from Iyer, 2018) discusses how the learning experience is dependent on several aspects. This includes the "context" that shapes the "conception of learning", which influenced the "approaches to learning". These factors are discussed in the next sections starting from the approaches to learning, which is the focus of this investigation, the other two factors are addressed by exploring their relation to learning approaches.

3.5 Approaches to learning

Learning approaches developed as a research area from the early 1970s. At this time, an increasing amount of research became interested in investigating the qualitatively different ways students learn in diverse educational contexts and parameters (Svensson, 1977; Marton and Saljo, 1976 & 1979; Biggs, 1970 & 1978). They explored how the performance varies with the differences in content and more importantly, the way students perceive their performance. As a result of these inquiries, Marton and Saljo (1976) identified students' learning approaches as the method to understand students learning. The actions students' take while undertaking specific learning tasks are described as learning approaches. This identification is a direct outcome of the original studies at the University of Gothenburg, that was focused on exploring learners' understanding of meaning in learning pursuits and results. In this study, students were given a text to read and told that they would be asked questions on the text afterward. Two kinds of responses by students were observed; some students learned in anticipation of questions, to prepare for the task ahead by concentrating on the aspects that might be asked. Marton and Saljo stated that "they skated along the surface of the text" and identified these students possessing a surface approach to learning. Another group of students were interested in understanding the meaning of the text and grasped what the author was trying to say, they were identified as going below the surface and possessing a deep approach to learning.

The research was commenced to identify, differentiate, and categorise the students' learning ideas. It gave rise to a new qualitative research methodology rooted in grounded theory and known as "Phenomenography". Used in an increasing amount of research since its formation, phenomenography investigates the qualitatively different ways in which people experience something or think about something. In other words, to identify the variation of conceptions that people have of a phenomenon.

This pioneering research by Marton and Saljo led to a series of further studies and introduced some relevant concepts for learning approaches, the most celebrated of which is the “Achieving approach” by Biggs (1979). Unlike phenomenography, which is rooted in individual differences psychology, Biggs work is rooted in cognitive psychology based on constructivism. Constructivists believe that reality is determined by the experience of the learners, and people actively construct to build their knowledge (Steffe, 1995). Although based on different philosophical positions, both phenomenography and constructivism possess an underlying commonality, that is meaning is not imposed or transmitted by direct instructions, instead, it is created by students learning activities, perfectly summarised as “learning approaches” (J. Biggs, 1999).

3.5.1 Deep learning approach

In a deep learning approach, students focus on learning the concepts and ideas behind them rather than just completing the tasks. They always try to make sense of new concepts, by analysing them based on what they already know. This way they gradually increase the knowledge that is grounded through an in-depth understanding of the topic. In any learning situation, the learners holding a deep learning approach try to connect the key themes, ideas, and concepts (Marton and Saljo, 1976). Research explains that students who engaged in the deep learning approach often possess a positive frame of mind and a high level of self-motivation (Biggs, 2011; Moon, 2013). Such students reflect on their learning and tend to turn the learning experiences into pleasure by extending their imagination beyond the learning contexts.

3.5.2 Surface learning approach

In the surface learning approach, students perceive the learning tasks as imposed responsibility, something they need to cope. They involve in learning without any reflection on the purpose of it or the right strategy to learn, they tend to learn without making a connection between the ideas and concepts. As a result, the learning is fragmented, and facts are treated as independent entities with the absorption of content and no focus on underlying functions of the context. Biggs (1999) refers to the activities of the surface approach being on a low cognitive level. He also identified that the outcomes of such learning are very fragmented, and it does not convey the meaning of the encounter.

Memorising the lesson or the act of rote-learning based on repetition is typically identified as the surface approach to learning in the western context, and is discouraged (Biggs, 2011; Marton and Booth, 1997; Moon, 2004). However, Marton et al. (2004) examined learning approaches influenced by the context and identified that in Asian countries, especially in Chinese students the act of rote learning is associated with the deep learning approach. Memorising is seen as part of acquiring and retaining knowledge in this context.

3.5.3 Achieving (strategic) learning approach

The third type of learning approach is based on students' focus on "achievement", and that is why Biggs (1979) identified it as an achieving learning approach. It is also described as a strategic approach as students "strategies" in this approach to achieve (Iyer, 2018). Unlike deep and surface learning approaches that are motivated by the interest in the subject or lack of it, the achieving approach is motivated by the intention to get the highest grades. Students will be alert to assessment criteria, and they work based on the perceived preferences of the tutors to ensure success. In this approach, the learner is seen to be adopting aspects of the deep and surface learning approach with the strategy of fulfilling the assessment criteria and being successful in the learning scenario. Often students with ambition and organisational capabilities adopt this learning approach (Biggs, 2011; Prosser and Trigwell, 1999).

Biggs (1987) identified a fundamental difference between the strategic and the other two learning approaches. According to him, the strategies involved in the deep and surface learning approaches describe how students engage with the context of the learning task itself. Whereas in the strategic learning approach, students are focused on organising the temporal and spatial contexts surrounding the tasks. For example, in strategic approach students conduct rote-learning in a highly organised way, therefore, although a surface learning technique, it becomes consistent with deep learning.

3.5.4 Motivation and strategy behind the learning approaches

Trigwell, Ellis, & Han (2012) explained through a study that the learning approach of students is related to their emotional learning experiences. Students adopt a deep learning approach if they have had positive learning experiences in the past. Meanwhile, students having negative experiences were found to be adopting surface learning approaches. This study concluded by suggesting that the design of a new learning

environment could considerably affect students' emotional range of learning. Marton and Saljo (1997) introduced the concept of intrinsic and extrinsic motivation associated with deep and surface learning approaches. According to them, most of the time students adopting deep learning approaches have intrinsic motivation. They do not get motivated to learn because they feel threatened by some external factors; instead, the motivation comes from within. In contrast, students adopting surface learning approaches have extrinsic motivation and feel constantly threatened by their learning context. Table 3.1 explains the motivations behind different learning approaches, and the strategies students are most likely to adopt.

Approach	Motivation	Strategy
Surface (Reproducing)	Extrinsic motivation The intention is to cope with course requirements No reflection on purpose and strategy of learning	The target of learning is limited to bare essentials; knowledge is reproduced through Rote-learning Memorising information for meeting the assessment criteria Treat the tasks as an external imposition.
Deep (Transforming)	Intrinsic Motivation The intention is to understand the ideas. Study to actualise interest and competence in a particular subject area.	Reading widely including different aspects of learning. Looking for patterns and linking different parts of learning. Relating ideas to previous knowledge and experience. Relating theoretical knowledge to everyday experiences.
Strategic (Organising)	Achieving Motivation The intention is to achieve the highest possible grades. Learners motivated by competition and ego-enhancement. Achievement of high grades is the goal.	Putting consistent effort into studying Managing time and efforts in the most effective manner. Focused on the right conditions and materials for studying All the attention to criteria and requirements for assessment.

Table 3.1: Motivation and Strategies for the three approaches to learning (Adapted from Biggs, 1987).

The three learning approaches are likely to lead to distinct levels of quality of learning. The deep learning approach leads to the structural complexity of learning; the surface approach leads to the accurate but unintegrated structure of learning. Furthermore, a strategic approach is likely to lead to whatever goals students assume as most important in leading to high grades. Literature also discusses that learning approaches do not necessarily have a direct relation to success, as students adopting deep learning

approaches are not always at the highest point when it comes to assessment and grades (Moon, 2004' Ramsden, 1992).

3.6 Students' Prior Experiences (Learning Conception)

As identified in Figure 3-3, learning conception is an integral part of the learning experience and has a direct influence on the learning approaches. Students enter the learning scenarios with a significant variation in background and skills. They can have a different level of understanding of the learning situation (Prosser and Trigwell, 1999). Two aspects that can affect students' learning approaches are 1) how they previously approached their learning 2) and what are their thoughts and experience of the subject they are going to study.

The most cited and celebrated study of students' prior experiences of learning and understanding is the theory of Learning conception by Saljo (1979). The conception of learning is how a learner modifies the structure of knowledge in a specific learning context. Saljo (1979) conducted a study with a group of adults to explore what learning meant to them and explained that there are five qualitatively different ways of learning conceptions (identified in Table 3.2). He identified the first three as the "reproductive" conception of learning and the remaining two as the "reconstructive" conception of learning. Through a study with Dutch students, Van Rossum and Tylor (1987) found a sixth learning conception that is learning as changing a person. They explained it as "a conscious process fuelled by personal interest and directed at obtaining harmony or changing society". This conception was identified to present in very few learners.

Prosser and Trigwell (1999) made a case through a review of learning theories that background experiences and knowledge (learning conceptions) are evoked by the current learning situations and define the quality of learning (learning approaches). Rossum & Schenk (1984) explained that students with reproductive conceptions adopt the surface approach to learning; in contrast, students with reconstructive conceptions tend to take a deep learning approach. As per the definition of strategic approach, it can be based on reproductive and reconstructive conception depending upon the requirements of assessment (Table 3.2).

	Learning Conception	Category of Learning Conception	Learning Approach	
1	Learning as an increase in knowledge	Reproductive	Surface	Strategic
2	Learning as memorising			
3	Learning as questions of facts			
4	Learning as the abstraction of meaning	Reconstructive	Deep	
5	Learning as an interpretative process aimed at the understanding of the reality			
6	Learning as a conscious process	Changing as a Person		

Table 3.2: Learning conceptions and their relation to learning approaches

3.7 Students' Perception of their Learning Situation (Learning Context)

As mentioned in Figure 3.3, learning context is the third aspect that affects learning approaches. Prosser and Trigwell (1999) established through a detailed analysis of learning examples in different scenarios that the way students perceive their teaching and learning situation is central to the quality of their learning. Students focus on different aspects of teaching context and learning, and for this reason, different students can find the same learning situation as too much or not too difficult. They also explained that students' perception of the learning context is of two levels. In the first level, students understand the context which can be mostly similar among a group of students or have small variation. In the second level students have a perception of their situation within that context. For example, students can identify a learning context or their learning situation in the context as difficult. Their perception of their position in a learning context is more important.

Prosser and Trigwell (1999) also explained that there is significant variation in the way students recognise and describe the quality of teaching within the same learning context. This also impacts the clarity and significance of the goal, essential amount of work, and the assessment requirements (Ramsden, 1979). These factors affect the learning approaches adopted by students (Ramsden et al, 1997). Students who are aware of more and deeper aspects of their learning situation are more likely to take a deeper learning approach (Entwistle, 1998). Whereas students who see the learning situation as imposed tend to adopt the surface learning approach (Meyer et al, 1990). They are motivated to

meet the requirements of the task with possible minimum effort by focusing only on what seems essential and reproducing the knowledge as accurately as possible. In a strategic approach, students possess a relatively broader knowledge of their learning context, and they tend to use it to devise a strategy to meet the assessment requirements with a minimum possible effort similar to the surface approach of learning. It is the universities' and teachers' responsibility to produce a learning context by understanding that each student is situated differently in that context, and they will perceive it distinctly.

3.8 Critical Analysis of Learning Approaches

Figure 3-4 shows the three concepts that were mentioned in Figure 3-2 as red boxes, it also shows different concepts and theories discussed in the chapter so far with grey boxes. Supporting concepts under Bourdieu's theories are identified with black boxes, and the unanswered queries are shown with white boxes. A summary of these concepts is discussed here.

In this chapter research on "perception of context", investigate students learning approaches that are influenced by their perception of their position in the learning context (Prosser and Trigwell, 1999). However, it is important to define the characteristics of this learning context, which is not explained by the research discussed in this chapter. This question is answered by Bourdieu through his field theory and the concept of habitus that is used in the literature to investigate institutional habitus; these two concepts are explained in detail in the previous chapter under sections 2.5 and 2.6. The "learning approaches" of students is a very well-researched and well-explained subject. However, it is clear after reviewing the literature on the learning approaches of students that no research investigates how students engage with teachers while adapting these learning approaches. Prosser & Trigwell's (1999) very well-structured deep investigation on understanding learning and teaching also explores the two as different acts, it does not investigate students' and teacher's relations.

Moreover, the research on learning approaches deals with all knowledge provided in a learning context as a single entity, although it does talk about students adapting deep and surface learning approaches might deal with knowledge as segmented or coherent (Moon, 2004). Nevertheless, it does not explain how knowledge can be segmented, neither it provides a framework for a deep investigation into the knowledge structure. In any learning context, knowledge is always segmented under different subject areas and

themes (Jones & Moreland, 2005). How students deal with this segmented knowledge while adapting diverse learning approaches, or how their natural inclination of dealing with segmented knowledge might lead them to a certain learning approach is a point of concern.

The two questions unanswered through the research discussed so far are identified in Figure 3-4 under learning approaches through the white boxes. These unanswered questions are going to be explored in the next sections under the concepts of Basil Bernstein (1964, 1971, 2003a, 2003b)

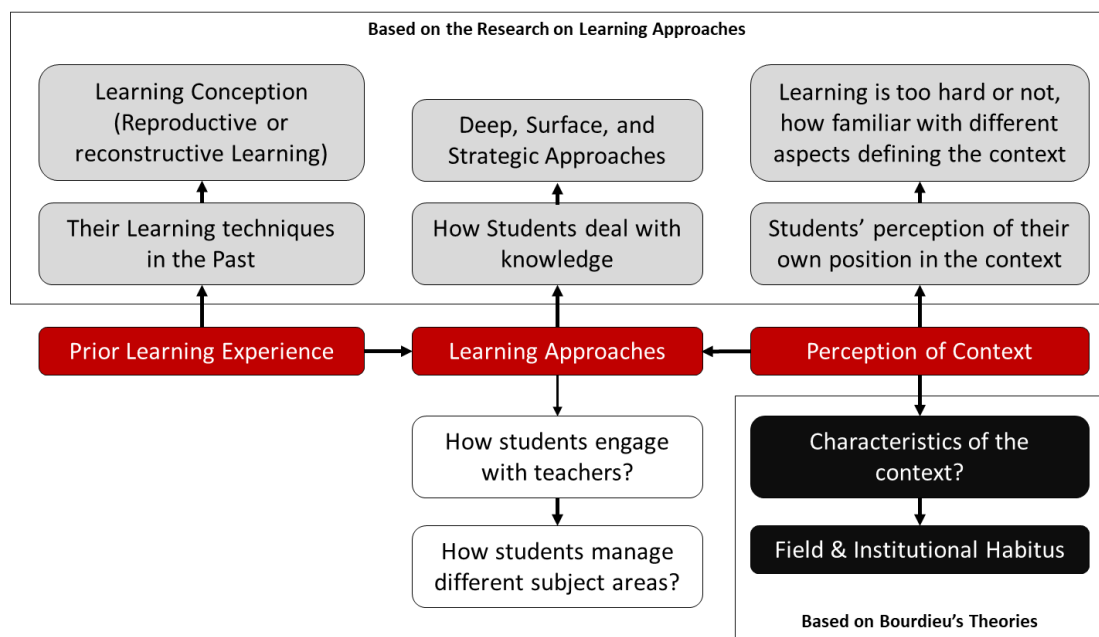


Figure 3-4: A map of concepts discussed in this and previous chapter and some unanswered questions

3.9 Students' Engagement with Teachers and Subject Areas: From Approaches to Codes

Marton and Saljo (1976) developed the concepts of learning approaches in the 1970s, followed by Biggs (1979) and others. However, almost at the same time another sociologist of education Basil Bernstein worked to understand the factors shaping the school's curriculum which led to the development of knowledge codes. Bernstein (1964) started his investigation on the sociology of education by investigating how social background defines the language codes and influences students' chances of success in school (discussed in section 2.6). Later he studied how curriculum and pedagogy work in a learning scenario and identified curriculum as what counts as valid knowledge and pedagogy as what counts as the valid transmission of knowledge (Bernstein 2003a). He

introduced the concept of classification and framing to analyse the underline structure of curriculum and pedagogy. Based on the boundaries of the knowledge transmission, classification defines the “what” of pedagogic practice. Similarly, based on the boundaries of social relations, framing defines the “How” of pedagogic practice (Sadovnik, 1991).

Classification refers to the relation between the contents of the curriculum, the two types are described as strong or weak classification. The former identifies the traditional collection type of curriculum where knowledge is sharply bounded into different subject areas with a little linkage between them. The latter identifies the integration type of curriculum where the interdependence of various areas of knowledge is emphasised, it is focused on transcending the traditional boundaries in the curriculum.

Framing defines the structure of the message system; this refers to the strength of what is transmitted in a pedagogic relationship. This outlines the level of control teachers and students possess over the selection, organisation, pacing, and timing of knowledge transmitted and received among them. Like classification, framing can also be strong or weak; the former would mean that the pedagogic relations are strongly defined in a learning scenario, and learners and teachers do not possess any control over it. The latter would mean that the pedagogic relations are not strongly defined, and learners and teachers possess some degree of control over it. Depending upon the strength of classification and framing, learning scenarios are categorised under two codes, named as collection and integrated codes, discussed in detail in the next section.

3.9.1 Collection and Integrated Codes

The relationship between classification and framing makes explicit the concept of educational knowledge codes called the “collection and integrated codes” (Bernstein, 2003b). Strong classification and framing result in collection codes. Since boundary maintenance of course content and pedagogical relation is strong in these codes, learning is based on well-insulated subject departments, and the hierarchical relation of teachers and students is very strictly defined. Learners are seen as ignorant in this pedagogical relation with limited rights and no voice of their own.

In contrast, integrated codes that are developed as a result of weak classification and framing represents a shift in power relation. Hierarchical control is weak as teachers of different subject areas interact frequently, and cooperation replaces competition.

Education is experienced as an exploratory endeavour with the merged boundaries of teaching and learning, and a strong collective identity is created within the educational groups. Unlike collection codes, knowledge here is subordinate to an integrating idea, and different subject departments do not enjoy the autonomy they did under collection codes. Bernstein argued that collection codes allow the diversity of ideologies, whereas integrated codes allow homogeneity in pedagogy. Salama (2013) discussed mechanistic and systemic pedagogies that are comparable to collection and integration codes. In mechanistic pedagogy education is treated in segments rather than a whole, in systemic pedagogy education is treated as part of a process.

3.9.2 A critical explanation for Learner's Perspective on Collection and Integrated Codes

Bernstein's concepts of classification and framing defining the collection and integrated codes are always used to explain the complex pedagogical relation and curriculum boundaries practiced in a teaching scenario (Gibson, 1977). Simply put, it describes the school's pedagogies in terms of the handling of curriculum and defining the teachers' learner's relation from teachers' and school administrations' perspectives. However, Bernstein (2003b) often discussed the learner's position in these two contrasting pedagogical relations under collection and integrated codes. Extracting from his concepts, this critical explanation attempts to explain the collection and integrated codes from the learner's perspective.

From the learners' perspective possessing collection codes mean that they rely on gathering the knowledge from different sources and sticking to one subject area rather than integrating it. Students identify each subject area as individual rather than accumulating them into a unified knowledge. Also, it means to be dependent on the teacher to define the pedagogic relation and not doing the effort to learn. In contrast, under integrated codes classification and framing is weak, and the learner integrates knowledge gained under different subject areas. They also establish a mutual pedagogic relation with the teacher; they take the initiative and ask questions rather than just being passive listeners. So, the notion of collection and integrated codes answers the questions "how students engage with teachers and manage different subject areas".

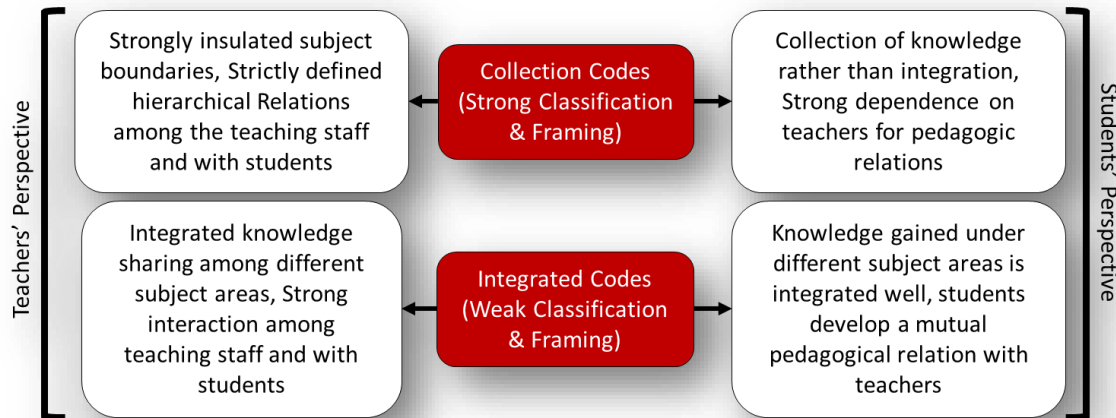


Figure 3-5: Collection and Integrated Codes from Teachers and Students' Perspective

Figure 3-5 explains how the collection and integrated codes provide a framework for answering these questions, it identifies the use of codes to explore the student's perspective of their involvement in developing the pedagogic relations and dealing with different subject areas.

3.10 Comparing Approaches and Codes

The structure of codes defining the learning practices is compared with surface and deep learning approaches as shown in Figure 3-6. This figure is adapted from the conceptual framework by Entwistle (1998) that discusses students' learning approaches linking them to their learning conceptions. Moreover, instead of dividing the students' responses into three categories of deep, surface, and strategic approaches, Entwistle provided a detailed description of students dealing with knowledge under different approaches. This analysis makes a case that collection codes are comparable to surface learning approaches because in both notions, students do not engage deeply with knowledge. Similarly, integrated codes are comparable to deep learning approaches because, in both concepts, students deeply engage with knowledge. Process and Trigwell (1999) explained that deep learning approaches are students-focused and learning-oriented, whereas surface learning approaches are teachers-focused and content-oriented, these ideas are true for collection and integrated codes as well.

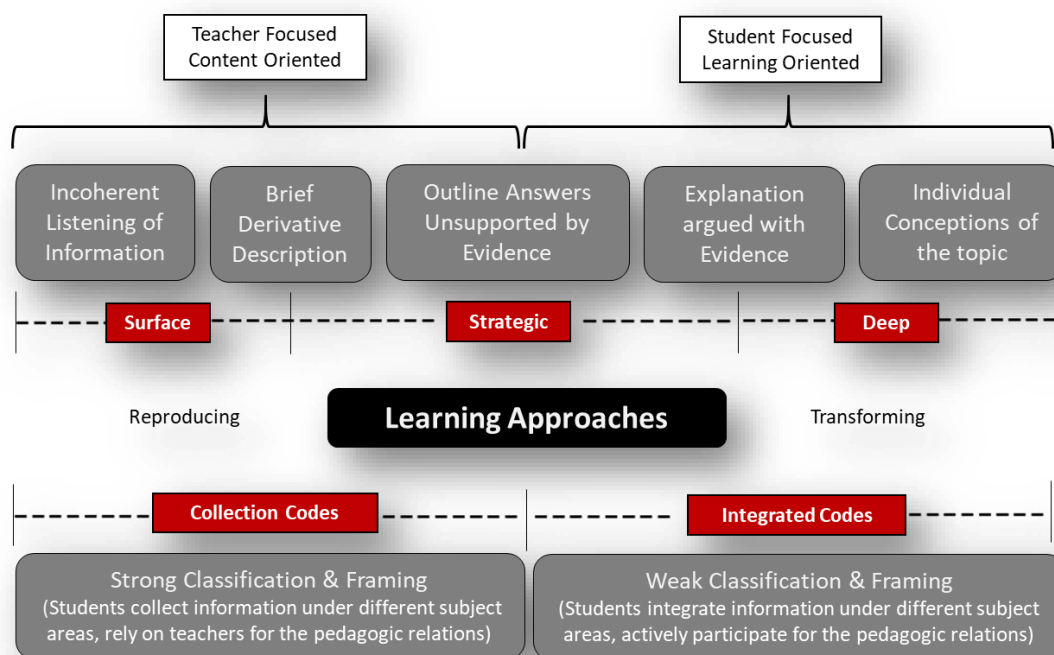


Figure 3-6: A Comparison of Learning Approaches to Codes

However, learning approaches do not provide an understanding of how students deal with different subject areas and participate in pedagogic relations, which collection and integrated codes do. Therefore, a combination of these two concepts is proposed in the current study for a deeper understanding of students' way of dealing with knowledge in a learning environment.

3.11 Relationship of Social Class to Learning Approaches and Codes

While talking about the factors affecting learning approaches, the literature explores the importance of social background and prior knowledge (Biggs, 1978; Prosser et al., 1994; Prosser and Trigwell, 1999). Mann (2001) has talked about reframing the students learning approaches from surface to deep and focused on alienated and engaged learning experiences. In doing so, she analysed seven different perspectives to learning, and students' current socio-cultural condition is one of these. However, the direct relation of social class with learning approaches has never been investigated in the literature.

On the other hand, Bernstein provided a link of social class to learning codes. He (Bernstein, 1975) gave the concept of visible and invisible pedagogies based on classification and framing. Visible pedagogies contain strong classification and framing (collection codes), and invisible pedagogies contain weak classification and framing

(integrated codes). The difference between visible and invisible pedagogies is how knowledge is transmitted in the classroom. In visible pedagogies, teachers control the structure of the class and students perform under it. Invisible pedagogies are practiced through less control by teachers and more action by students. He suggested that students from working-class families are more comfortable with visible pedagogies as compare to students from middle-class families who are comfortable with both visible and invisible, but they rely on invisible pedagogies as it is their strength.

This theory by Bernstein is been critically analysed in literature multiple times (Fong, 2006; Riksaasen, 2001); however, it has never been investigated through data. The concept of visible and invisible pedagogies is not used in this study because it is not as developed as learning approaches and therefore do not provide a strong methodological foundation.

3.12 Presage-Process-Product Model

Adapted from Dunkin and Biddle (1974), Biggs (1979) introduced the presage-process-product (3p) model, which he later kept updating (Biggs, 1989 and 1993). This model attempts to provide a detailed picture of learning in a classroom, where “Presage” identifies the experiences that students possess before learning takes place. The process identifies the strategies of learning concerning the perception of the context, and the product explains the outcomes of learning. This model explains that students’ experience of learning is dependent on their previous learning and knowledge, as well as their perception of the current context of study which defines their learning approaches. Finally, these learning approaches are related to the quality of their learning outcome. Biggs (1993) explains that different parts of this 3p model are not independently constituted; instead, they are related and interdependent. So, rather than describing a casual process, this model presents a continuously intermingling system.

The majority of research based on the 3p model is concerned with the process, which is to understand the learning approaches of students, using the method of surface, strategic and deep approach method (Clinton, 2014; Freeth & Reeves, 2004; C. Jones, 2002; Zhang, 2000). However, as mentioned previously in this chapter, this method fails to provide the complete picture of how students deal with knowledge and develop pedagogic relations. For this reason, in the 3p model here (Figure 3-7) a combination of learning approaches and knowledge codes is proposed in this study to develop a deeper

understanding of the process. Also, all the studies investigating the “process” using the 3p model only mention the importance of presage and do not conduct an in-depth investigation into it. Bourdieu’s concepts of cultural capital, habitus, field and institutional habitus (discussed in the previous chapter) provide an in-depth investigation into presage. The concept of learning conception provides information on how likely students are to rely on the presage.

Studies using the 3p model mostly use the product as an assessment for the success of different learning approaches, so the focus is not the product itself but the evaluation of the process. This current study is also focused on the process in relation to presage.

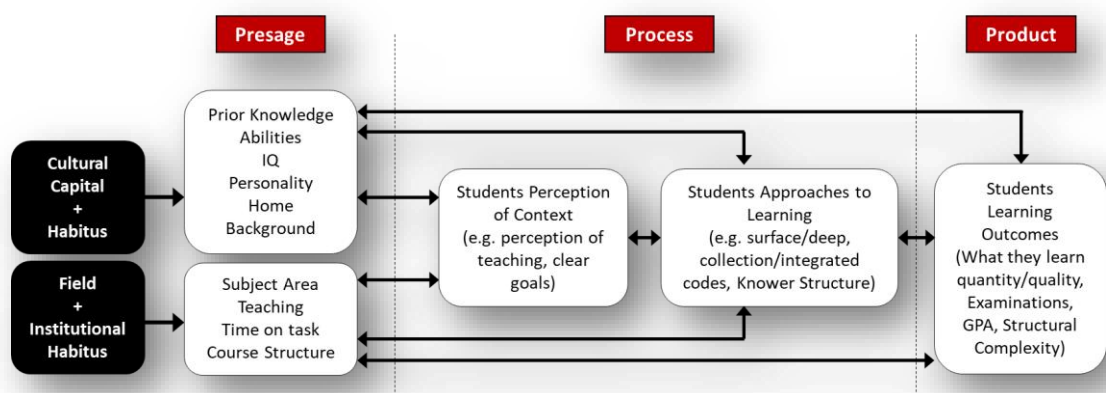


Figure 3-7: 3p model adapted from Biggs (1979), and Prosser and Trigwell (1999).

3.13 Conclusion

In response to Figure 3-1, Figure 3-8 answers the three questions mentioned in the introduction. To answer the first question that is the exploration of a suitable theory of learning. This chapter discusses the most relevant and widely used theory of learning approaches by Marton and Saljo, complemented by the collection and integrated codes by Bernstein.

The second question that is how these concepts support the current study is answered by the discussion on the relevance of learning approaches and knowledge codes in section 3.10. As mentioned before, deep, strategic, and surface learning approaches explain how students deal with knowledge provided in the school of architecture, collection and integrated task codes explain how students manage the knowledge provided under different subject areas and how they develop pedagogic relations. The notion of learning conception enables us to understand how students’ inclination to the use of

prior knowledge shapes up their learning approaches. Learning context helps to explore how students perceive their learning scenario and their position in that scenario.

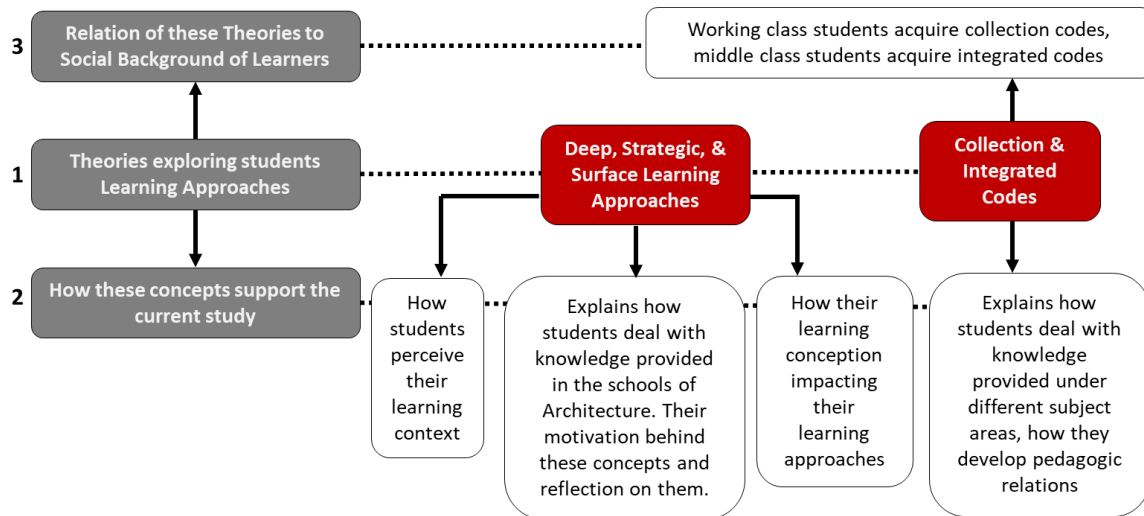


Figure 3-8: A conclusion of all the important concept discussed in the chapter

In response to the third question of the relation of these concepts to the social background of students. Learning approaches have been identified by the investigators to have a strong relationship with the background knowledge and personality development of the students, but this relationship has never been a focus of inquiry in literature. Bernstein identifies a direct relation of collection and integrated codes to the social background, but this relationship has never been explored through data or critically analysed by peers. Moreover, it is established through the literature review that the learning approaches are extended to the demand of the learning situation perceived by students based upon their historical training (learning conception). According to Prosser & Trigwell (1999), students' perception of learning context is in direct relation to their previous experience. Students' previous experiences and historical training are based on their early schooling and family life which is defined by their social background (Bourdieu, 1987). Therefore, there must be a relationship between learning approaches and social background.

Based on the parameters set in Figure 1-3, Figure 3-9 identifies the knowledge mapping of deep and surface learning approaches. Since this concept does not explore the importance of social background in detail, it does not overlap with the research on the impact of social background. Also, there is only one study (Iyer, 2018) that investigates the learning approaches in architectural education, so there is not much overlapping with the literature in architectural education as well. Figure 3.10, explains the research on

knowledge codes, and this overlaps with the concepts of social background and inequality in education because Bernstein developed the notion encompassing these concepts.

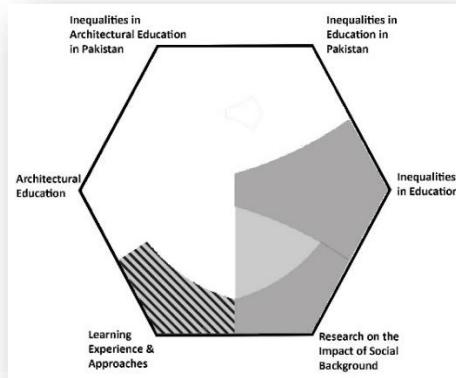


Figure 3-9: Deep and Surface Learning Approaches

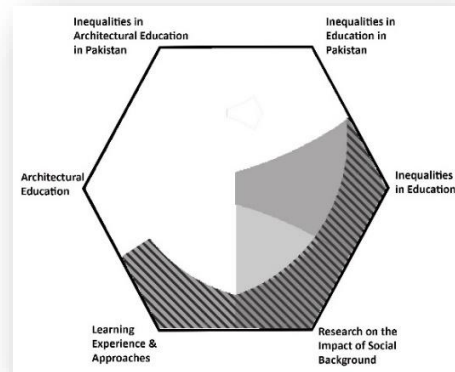


Figure 3-10: Knowledge codes

CHAPTER FOUR
Field of Architectural Education

4 Field of Architectural Education

4.1 Introduction

The term “field” is often used to describe a sphere of activity, a profession, or a complex social setting. However, the use of the term “field” in this chapter is specific to Bourdieu’s theory, as explained in chapter two. Bourdieu uses the field as a specific technical term; it is the range of objective possibilities defining our social world. It can be said that the field of architecture consists of architects, architectural academics, critics, builders, clients, construction law-making agencies, financial institutions, and architectural discourse and building regulations.

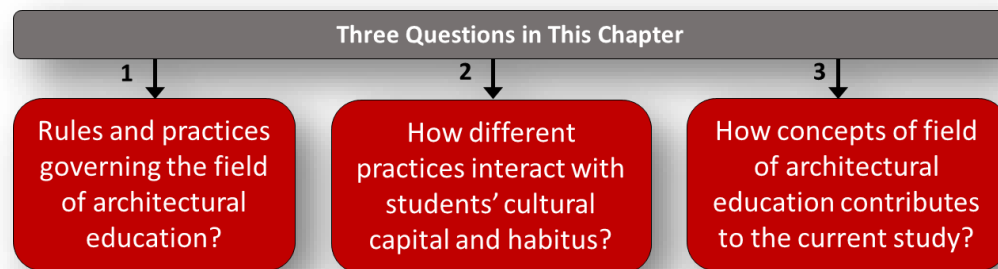


Figure 4-1: Three main questions to be explored in this chapter

All practices take place in a field, and the agents carrying out the practices play their role according to their position in the field as well as their habitus, as explained by the comprehensive formula by Bourdieu (Habitus x Capital) + Field= Practice (Harker et al., 2016). This construct helps analyse the complex social and cultural environment of Architectural education. Bourdieu’s work is implemented quite rarely in design education (Gray 2013) however his work has been used in architectural education on few occasions to discuss the social climate of design studio and discrimination in the project reviews. (Stevens 1995, Webster 2006). This chapter explores architectural education as a sphere of activities defining the social world in which agents work to legitimize their practices. It seeks to explore three main questions identified in Figure 4-1. These are, what are the rules and practices governing the field of architectural education? How different practices interact with students’ cultural capital and habitus? Moreover, how an understanding of the concepts of the field of architectural education contributes to the current study?

4.2 Field of Culture

Culture is the basic arena or in Bourdieu's term "The Field" over which society's symbolic battles are fought. It ensures the maintenance of the class system by making it difficult to enter the upper class, at the same time making it possible for the upper class to keep control of society's material and symbolic rewards (Bourdieu & Richardson, 1986, p. 243). Stevens (2002) explained the functions of the cultural field as the legitimation of the dominant culture and devaluing other capitals; this dominant culture is defined by individuals occupying the field. As Stevens mentioned, individuals fight for the legitimisation of their own culture in the field, and the one possessing the capital appropriate for the field wins. For example, in the field of education, cultural capital is the most required form of capital, which is defined by social class. Individuals possessing the most cultivated cultural capital will determine the dominant culture for the field.

Architecture being an integral part of any culture, the field of architecture is shaped up by the norms of the cultural field. Success in this profession is not only dependent on the right credential, but it also depends on all the hidden requirements that might never appear in the formal job description, but these requirements are the basis of the occupation's real social value. As Stevens (2002) explains:

To say one is an architect is not only to say that one has a certain sort of degree, or that one can design buildings, it is to say that one has a certain set of attitude, tastes, or dispositions, all the forms of cultural capital that distinguish an architect from a mere builder.

4.3 Field of architecture

Craik (1969) explained architectural education as a vast and complex, little studied and not deeply understood socio-psychological system. Identifying architecture as a field solves the historical debate of labeling it as an art or science. Stevens (2002) claims that the field of architecture is divided into two groups, designers of mass-produced buildings and the designers of elite buildings produced to satisfy the symbolic demand of consumers. Only the second type is considered as the real representation of the field of architecture. He identified the two as the field of the built environment (also field of mass production) and the field of

architecture proper (also the field of restricted production). Gans (1977) mentioned this dual character as “high culture” attracting a small but influential and well-educated sector of society versus “low culture” working for the majority of the society. He explains the field of restricted production by saying that the profession of architecture is mostly peer-oriented, and practitioners work for the approval of their peers and colleagues without giving much thought to the clients’ needs and demands. Sociologist Robert Gutman (1992) also claimed that the “natural market” for an architect is the buildings produced for social objectification. Stevens further explains that the fields of mass and restricted production in architecture do not act as a single entity; even their relationship is weak. The internal dynamics of the two fields are quite different; they run on two different forms of capitals. The field of restricted production is highly autonomous as it only deals with wealthy clients of high cultural capital. Whereas the field of mass production is highly dependent on the economy, wishes of the state, and demands of the consumers.

Different kind of cultural capital and habitus is required to be successful in both kinds of subfields (Stevens, 2002). People possess distinct personality dispositions or Habitus that define their possibility of achievement in the field. As Bourdieu said, having the right habitus for the field is like being a fish in the water, completely aware of the rule of games. So, the question arises, how a person achieve a specific kind of habitus to work in the field of architecture; can it be possessed during the years spent in the school of architecture? To dig deep into this question, the field of architectural education needs to be understood in detail.

4.4 Field of Architectural Education

In contemporary society, architecture reproduces itself through a well-designed system of education as well as a web of personal contacts. Historically there was a tradition of reproduction of architectural culture through long methods of training (Cuff 1998). Throughout its history, the field of architecture has relied on the transmission of cultural capital through chains of masters and pupils. One had to be a member of the nobility or gentry and should have taken the grand tour of the ancient sites of Greece and Italy to understand the correct values of architecture, only then one could be worthy of earning the status of an ‘Architect’. Under this system the master had a primary position, a student would be allocated

to a master and would learn from them all the required professional knowledge including the basic understanding of profession, skills, and competence, they would do so through a combination of observation, integration, and imitation (Webster 2005).

The training of the architects shifted from pupillage to academy in the 19th century. With a vision to formally train architects, the French state established a new method of reproduction in 1819 by creating the first school of architecture in Ecole des Beaux-Arts in Paris. A short while after that, University College London founded the first school of architecture in England. The curriculum established for the course and the pedagogical methods adopted were quite similar to the preceding master-student model. However, the big change was that instead of being taught by masters in the offices, the academic principles of architecture were now taught in lecture theatres by academics. Also, those principles were now applied by students in the design of hypothetical projects in the studio rather than the real projects in the design office. The tutor in the design studio took over the role of master architect and started providing one-to-one coaching to the students on their design projects (Webster, 2005).

However, the profession succeeded in maintaining control on entry to the profession through a system of articulated pupillage. Subsequently, in the post-industrial period, the requirement of the specialist workforce increased with the growth of industry and the profession of architecture became larger, so it had to open to new social groups. Against the precedent, the GI Bill after World War II enabled working-class and middle-income students to obtain a college education, and this enabled the first-generation college students from diverse ethnic, social, and economic backgrounds to access the university education for a profession like architecture. In the sixties and seventies, civil rights and women's rights movements helped to change the student demographics (Brady, 1996). The field of architectural education is now regulated through professional degree programs, accrediting boards, registration examinations, and licenses.

Cuff (1992) explained that the first impression of the architectural scene could be overwhelming for students (particularly the ones with low cultural capital) just like the first impression of foreign cultures. Architectural education is a lengthy process; it creates exchange value and makes them the possessions of individuals under special institutional

conditions (Crysler 1995). Groat (1982) said architects think differently than non-architects, and this particular thinking develops during the period of training in architectural school. Wilson and Canter (1990) showed the conceptual transformation that becomes evident through each year of professional preparation. Students develop abstract and complex concepts to organize their knowledge during architectural education. Wilson (1996) states that the period of training in schools of architecture systematically instills an evaluative and systematic character of the profession. Porter (1979) explain architectural education:

It draws from an artistic and professional tradition and has had its dominant goal the production of design practitioners. It introduces its students into the profession of architecture, instilling interpersonal, intellectual, and political skills appropriate to membership in that profession, and imparting design and other skills sufficient to function effectively in that profession.

So, the time spent in architecture schools enables students to transform their habitus to be closer to architectural habitus. Box (2007) discussed how different practices in architectural school make pupils think like an architect. It transforms their cultural capital by providing the architectural discourse, which becomes a part of their personalities. However, it is believed that the life spent before coming to the school of architecture leads them to have a particular kind of habitus. Students with high cultural capital possess a habitus already closer to architectural habitus; such students might find it easier to adjust to the school's environment (Stevens. 2002)). Therefore, coming from different social backgrounds and possessing different habitus can strongly influence students' experience of learning in the schools of architecture.

4.5 Architectural Taught Curriculum

There are several different allied professions and disciplines associated with the profession of architecture, making it a distinguished field from many other university programs. Several issues are associated with architecture including interior, exterior, site conditions, climate, light, wind, structure, material, colour, construction, durability, habitability, and aesthetics, all of these constitute the education of an architect. The study and practice of architecture have become more complex and specialized in the 20th century. Instead of the traditional role of a mass builder as proposed by Vitruvius (D'souza, 2009) the architect in contemporary

society is one specialist in the whole group of specialists. As a result, the role of architectural education has been limited to the building (Brady 1996). However, with the increase in specializations there is an increased demand for making a connection between different areas of a project. Being the head of the project, it's the architects' responsibility to connect all aspects of the project, so an architect must be aware of all the allied disciplines. Brady (1996) says that the whole of architecture is greater than the sum of its parts. National Architecture Accrediting Board (NAAB) USA performance criteria assessment defines architectural design education as:

Developing the ability of students to synthesize social, environmental, aesthetic, and technical considerations into a cohesive and unified architectural entity and include an understanding of process and product. (NAAB)

UK architecture syllabus includes five subject areas as identified by the Royal Institute of British Architects. These subject areas are architectural design, the cultural context of architecture, environmental design, constructional and architectural technologies, communication skills, and professional studies and management (Nicol & Pilling, 2005). However, it has been changed recently; the new system follows the 11 points of the EU directive of education with some further amplification (Directive 2013/55/EU., 2013, Article 46).

Different topics are pursued concurrently in separate courses, and then there is the design studio where students try to make sense of all the information provided to them in different courses by implementing it in the design projects. Generally, the initial year of study has a more linear approach, where the emphasis is on introduction to specific aspects of architecture to build a foundation (with variations in different schools). However, the upper level of degree is focused on the integration of a multitude of issues relating to a project type. It is observed and reported in the literature that sometimes students find it difficult to implement the concepts they have learned in theoretical subjects to implement in design projects (Tzonis, 2014). They store the knowledge in their memory, but often it is not implemented in the design projects. To bridge this gap between theory and practice, architectural schools arrange for their students to work in design firms.

All subject areas compulsory for architectural education are included in the curriculum by each school, however, different schools can have varying levels of emphasis on different subject areas. A study was conducted by Groat & Ahrentzen (1996) on the perception and vision of architecture students in school, involving more than 650 students in six architecture schools in the USA. The purpose of the study was to explore how both the content and form of architectural education might obstruct or support the development of female and minority students. The study shows that the curriculum emphasis, as well as the pedagogical style of the school, exert a direct impact on certain aspects. These are demographic diversity, the proportion of different gender in students and staff, the proportion of different ethnicity in students and staff, and the proportion of students with varying social backgrounds. It is also observed that students (with different habitus) show interest in different types of subjects with some students being more interested in architectural science, some in the artistic side of architecture, and some concerned with the social issues related to architecture.

4.6 Design Studio

The design studio is the most dominant subject in architecture learning with the highest contact and credit hours per week. Other subjects serve the design studio by providing the necessary information to support the design project. The relationship between the design studio and academic coursework is the key point in linking theory and practice in architecture. The design studio is meant to provide the knowledge and expertise compulsory to produce design solutions that are creative, innovative, and competent (Gross and Do, 1997). Developing students' imagination in design and allowing them to produce an architectural design that is balanced in a poetic and pragmatic sense is the main objective of the design studio. It is identified as the ideal place for developing interpersonal relations in the teaching and learning process as compared to a conventional classroom (Casakin & Davidovitch, 2013). Through an extensive literature review, Lueth (2008) makes a case that a design studio is a unique learning environment that is a combination of three types of learning environments. These are 1) constructive learning environment, where learners work together towards a goal and help each other out (Wilson, 1996). 2) Problem-based learning environment that is

focused on critical thinking (Barker, 1994) and 3) learner-centered learning environment that puts students learning experiences at the forefront (Huba and Freed, 2000).

As mentioned before (section 4.4), in the design studio students work on the architectural problems that are hypothetical projects; these architectural problems in the studio are important because of two reasons. First is that students remain associated with them throughout the semester and secondly and most importantly, they become the part of the portfolio that students present to different employers for a job (Cuff, 1992).

4.6.1 Pedagogical Practice of Design Studio

The pedagogical practice used in most design studios is criticism of each student's efforts at synthesis. Most of the time, an architectural "problem" is presented to students, and information relating to the problem is made available (Salama & Wilkinson, 2007). Students undertake the sometimes lengthy and often frustrating process of finding a "solution." This learning process can be confusing and frightening for many students, especially at the beginning of their learning as they lack confidence in their learning capability (McClellan, 2009 in Al Maani, 2019).

Studio teachers talk frequently with the student during this problem-solving and synthesising process (Attoe & Mugerauer, 1991). Lueth (2003) explained different ways architectural design project influences learning in the design studio, identifying it at the heart of learning in the design studio. The focus of the design studio is to develop critical thinking skills and reflective practice (Clune, 2014). Previously existing knowledge on the projects helps students in finding their direction in the form of literature review and case studies (Jones P.B, 2002)

The pedagogical core of the design studio is defined by Mewburn (2012) as the "desk crit". This is an activity where the teachers work with individual students in a collaborative manner, discussing and drawing options and visualizing the outcomes of design choices. However, in the architecture schools of the UK, teaching is focused on the one-to-one tutorial, in both cases, it is done through social interactions among teacher and students. Similar teaching practice is conducted in the architecture schools of Pakistan.

4.6.2 Factors Defining the Success

A significant amount of research is done to explore the factors that define success in the architectural design studio. Gajda (2016) grouped three categories of factors that affect student's performance, that are students' characteristics, teacher's impact, and school's properties.

Another important factor associated with design studio performance is creativity. Guilford (1975) gives an influential theory of creativity that entails divergent thinking. This is based on the ability to create new and original solutions to given problems in contrast to convergent thinking that is the ability to apply logic and rules to provide a single correct solution for a problem. Runco (2008) believes that the potential for creative thoughts is estimated by divergent thinking. Tasks like architecture that cannot be completely determined by available information and have no single correct answer are most appropriately handled by divergent thinking (Potur & Barkul, 2009). It includes factors like fluency, flexibility, and originality (Guilford, 1975). Architecture requires divergent thinking to provide the most imaginative and innovative solutions to different design problems (Cho, 2017). Paker Kahvecioğlu (2007) discussed the contextual key elements of the design studio that influence the creative abilities of students and pointed out five elements. These are 1) freedom of expression, 2) leadership orientation towards knowledge creation, 3) sufficient resources, 4) engaging in challenging work, and 5) trust-building among peers and with tutors.

Demirbaş & Demirkan (2003) researched to evaluate the effects of learning style preferences on the performance of design students. It was found that there were statistically significant differences between the performance scores of students based upon their learning styles at various stages of the design process. A similar study was conducted by Kvan and Jia (2005) using Kolb's model that explored the relation of students learning style and performance in the architectural design studio, and they also concluded that a strong correlation exists between learning styles and performance. They mentioned that the formulations of the design studio and extensive presentation requirements could benefit certain learning styles more than others. Cho (2017) emphasized that spatial ability and visual cognitive style, that is the capability to process information in terms of objects and spatial images have a direct

influence on design performance. His study shows that male students have better performance in spatial ability as compared to female students.

4.6.3 Reflective Practice

The most discussed and perhaps most diversely implemented notion of design studio learning is the reflective practice by Donald Schön (1983, 1985, 1987). He described the way architectural students implicitly act while designing as “reflection in action” (1987, p26), that is thinking, connecting with feelings, and attending to theories in use while designing in the studio. They also use “reflection on action” (1985, p. 74) that is looking at the experience and learning from it for a better design. Webster (2008) explained the concept as:

Schön defined ‘reflective practice’ as occurring when skilled practitioners responded tacitly to situations of uncertainty, instability, or uniqueness, through a combination of intuitive “knowing-in-action”, “reflection-in-action” and “reflection-on-action”.

With these concepts, Schön introduced a new generic epistemology of professional practice (the reflective practice) with professional action (Reflection ‘in’ and ‘on’ action) and professional being (the reflective practitioner). However, Webster (2008) strongly criticized Schön’s concepts by identifying shortcomings in it that helps in understanding architectural education in more depth. She explains that Schön’s notion of students’ learning is limited to formal pedagogic encounters, which is not the actual case. Students learn from most informal encounters as well. Schön believes that students learn through a process of listening, watching, and imitating their tutors (1985, p 32) that leads them to design solutions to problems at hand. However, Webster (2008) pointed out that there might be and most likely to be more than one solution to a design problem, she believes that Schön fails to acknowledge that architecture is a dynamic and contested field and this has ramifications on design studio learning. However, reflective practice is still used in architectural learning in different ways, Roberts (2009) discussed the importance of reflection in workplace experience for students in architecture and identified that reflective practice could impact the achieved outcomes.

4.6.4 Students Habitus in the Design Studio

Anthony Roberts (2003) argued that a design studio is a culture that is dependent upon a collective will of people to work together. Therefore, it is a place where students' habitus plays the most important role. An alternative to the shortcomings in Schön's theory pointed out in the previous section, Webster (2008) proposed that individual learning of design should be associated with the notion of habitus. She argues further that anyone who teaches architecture knows that inculcating knowledge, skills, and abilities of students is not enough for them to be architects, students might behave and learn differently based upon their habitus, even when they are provided with a similar learning environment and given same instructions. The relevance of habitus with design studio pedagogy is identified in the literature multiple times. Yazici & Yazici (2013) states that every student has a different way of observing, interacting with, and responding to the learning environment. Gray (2013) mentioned that the norms of the design studio could be deconstructed based on the concept of habitus, he identified that it could be an effective way to tackle the complexity of relationships among students learning experiences and the formal pedagogy of design studio. Brown & Clark (1953) use the concept of habitus to explain that the inherited paradigms of design studio education instill students into accepted ways of thinking and working.

4.6.5 New Dimensions in Studio Pedagogy

Vertical studio in the architectural school is not an entirely new practice, however, it is not as commonly adopted. The conventional studio practice is sequential, it divides students into different years, and they need to pass the design studio along with other theory and practical subjects to be promoted to the next year. Vertical studio lets students with different skill levels, often from different years of study in the school of architecture to come together under a theme-based studio and allows them to learn from each other (Liem, 2010). It is based on the notion that design learning is not a linear process and is stimulated by experimental circumstances; it provides substantial freedom of choice (Barnes, 1993). In western countries, many schools are practicing vertical studios for a long time; however, in some developing countries like Pakistan, this practice is still new.

Another new pedagogical concept used in design learning is the research-based design or architectural design research, Fraser (2014) provided a detailed definition of architectural design research.

...it can be described as processes and outcomes of inquiries and investigations in which architects use the creation of projects, or broader contribution towards design thinking as the central constituent in a process which also involves the more generalized research activities of thinking, writing, testing, verifying, debating, disseminating, performing, validating, and so on.

Conventional design studio practices also involve research, and their intensity increases with each year in education. However, this research is most of the limited to early investigations about some aspects of design, site, and users. This does not incorporate the design stage. Till (2008) explained that because of this lack of incorporated research in design, the design practices are mythologized for a long time. As an alternative, he provided a model for design research and described that research needs to be incorporated in design at three stages that are process, product, and performance.

As these two pedagogic practices are not common in Pakistan, it is crucial to see how the schools involved in this study practice them, and what impacts they might have on students learning experiences and approaches.

4.7 Hidden Curriculum

It is undeniable, although rarely talked about that architectural education has a powerful 'hidden curriculum' that socializes and acculturates students into the values (particularly aesthetic, motivational, and ethical values) and practices (including language, deportment, and dress) of the discipline. (Dutton 1991)

Hidden curriculum refers to those unstated attitude, values, and norms that silently stems from the content of the curriculum, and more importantly from the social relations of the school and classroom. While exploring the development of values in the curriculum, Roberts et al. (2006) claimed that the effects of the hidden curriculum in Architecture often remain undocumented as compared to the defined curriculum. The hidden curriculum can have a very strong and defining role in learning, and that is why it is important to explore different aspects.

4.7.1 Studio Pedagogy

As discussed earlier, the studio has a predominant impact on architecture students. Students' experience of studio pedagogy forms the base of their understanding and interpretation of architectural education (Groat & Ahrentzen, 1996). McClean and Hourigan (2013) stated that "studio environment remains a critically important community setting for learning in architectural design". Linking the studio tradition with the historical model of master-apprentice, the studio pedagogy has been characterized as the "Mystery-Mastery" approach (Argyris, 1981). According to this phenomenon, the instructor has mastered the craft of architecture, but the process by which the instructor attains this mastery remains a mystery. This leaves students in the mystery of how to attain that mastery themselves.

In this context, the students began to believe that mystery is an indication of mastery of the instructor. (Ahrentzen & Anthony, 1993).

This mode of learning has different impacts on female and minority students as well students from proletariat backgrounds, as they can be less comfortable with a format that privileges persuasion over dialogue (Groat & Ahrentzen, 1996). It channels privileged students (the ones with high cultural capital) into becoming custodians of the status quo.

4.7.2 Social Dynamics

McClean et al. (2013) established a studio as a setting for social learning. The studio environment provides a unique learning experience to architecture students with an emphasis on social connections. This practice stresses collaboration that facilitates learning (Parnell 2001). Students work most of the days of the week in designated workplaces next to their peers, and there is extended one-to-one contact with faculty. There is a high level of interaction between instructor and students and among peers, this large-scale interaction initiates students into the cultural norms of the profession of architecture, making this socialization process significantly influential (Olweny, 2017). Because of its intensity as a working place, the social dynamic of studios has a significant impact on students' learning experience.

Socialization of students into architecture is done on the framework set by the teachers who are considered the custodians of architectural education and the cultural capital required to

excel in it. They brand the architectural education according to their understandings and rules, only because they are in a position to do so (Dutton, 1987). Olweny (2017) termed it as “Enforced Socialization”. Dutton (1991, p172) says that in hierarchical relations, teachers often unintentionally speak in ways that legitimize their power as a result, students orient their speech and work to relate with the teacher’s point of view or habitus. However, McClean et al. (2013) criticised these orthodox practices and suggested inverting the role of the tutor as a traditional academic leader in favour of a democratic learning environment in the studio. The competition among students to excel in the course is supposed to bring out the best in students, however, Dutton (1991) claims that it also brings out the worst by raising the unnecessary emotional pressure and antipathy among peers. The competition also encourages students to protect the ideas that lead them to work in an isolated environment producing a negative atmosphere in the studio, and the students that are not very confident about their work (the ones with lower habitus) are more likely to be affected by this negative environment in the studio. Regardless, literature has emphasised the importance of learning through peer interaction. McClean and Hourigan (2013) claimed that peer learning is complementary to but different from the learning derived through interactions with the tutor. They explained that students learn around other students with or without the presence of the design tutor.

4.7.3 Communication Skills

In general practice, there is a definite hierarchy of relations in a studio practice that is dependent upon the dialogue. The dialogue is a requirement for students to voice their opinion, and it requires an equal distribution of power that ensures equality of participation (Dutton 1991). Sidawi (2012) explained a strong connection between communication skills and creativity and identified that teachers need to be sensitive to students’ skills and abilities. Nicol and Pilling (2005) described the importance of communication skills in architectural practice and points out that conventional teaching practices do not provide the training for the development of communication skills. This skill is strongly connected to the assessment process in architectural education that is the crit or review. Wilkins (Nicol and Pilling, 2005) claimed that students’ active participation in crits is dependent on their communication skills.

However, there is little evidence that these skills are enhanced through the process of crit, indicating that only the students already possessing excellent communication skills perform well in the crits. The role of crit in architectural education and how it is influenced by cultural capital and habitus is further explored in section 4.9.

4.7.4 Threshold Concepts

These are the central ideas that are may be difficult for some students to grasp, but once they are mastered, they change the way related knowledge is understood and subsequent learning is attained (Land et al., 2010). Students have unique threshold concepts, and it can hinder their path of learning to become successful architects. Project-based learning has rigorous demands, the need to generate work continuously or the fear of falling behind puts extra pressure on students, and they sometimes sidestep conceptually difficult elements to complete work in time. As a result, they end up producing work that seems correct but does not demonstrate a grasp of underlying principles. Williams (2014) conducted a study to identify the design studio as a liminal space, holding the learner in a supportive, in-between state where learning resources can be directed to troublesome areas.

Sometimes there may be a misperception from a student that they are not welcome in a group, but the isolation is because they do not understand they have not met a threshold concept. Different threshold concepts for students in the architecture schools of Pakistan, and how this is related to their cultural capital and habitus is a crucial point of inquiry in this study.

4.7.5 Entry to the school

Admission policy to school plays a vital role in determining students' success. However, it is not given the required emphasis in literature. Several important issues are revealed by surveys conducted on admission policies in over 120 schools of architecture worldwide (Goldschmidt et al., 2000; Salama, 2005). Results indicate that various admission criteria have been given importance in different schools, overall results in high schools are given the most importance in school admissions. After this, skill-based aptitude test and portfolio submission are given importance, knowledge and critical thinking is given the least importance.

School entry may seem like a less important aspect of the hidden curriculum in architecture schools, but it is observed to create a massive impact on students' performance in the school.

Salama (2008) states that admission policy is sure to impact students' performance in the school but very little has been said or written about it. Admission policy makes it possible for students of varying habitus to enter school; implicating that they will have diverse learning experiences in the school.

4.7.6 Long Working Hours

The project-based learning in Architectural education and the high levels of engagement it expects from students leads to working for long hours. This practice is at the heart of the social structure of the design studio (Cuff, 1992). There is unsaid pressure on students to remain and work in the studio for late hours to compete with the demands of projects. An architecture student pointed out that tutors force them to stay in the studio even if there is nothing to do, as they talk about bonding with space (Brady 1996). This can be overwhelming for some students, particularly females. Female students may not feel comfortable staying in the studio in late hours (especially in the conservative society of Pakistan) and some students are might just not comfortable with working so late in the studio which can affect their performance.

4.8 Architectural Student and Tutor

Unlike traditional learning, the design studio is based on the relationship between students and teachers, and that is why it is essential to investigate and understand different viewpoints about it. Craik (1969) states that the architectural student himself can be thought of as a multifaceted, little-understood socio-psychological system in his own right known as the human personality. Crysler (1995) claimed that architectural education is strongly prejudiced towards an attitude of the transmission model of pedagogy. This is systematized around imparting a specific set of skills that define what it means to be an architect. This form of teaching sees students as a single body with no ideological and material forces, acting as blank screens with the same underneath it all approach, ready to receive a direct broadcast of skills and information as described by the experts (Giroux, 1983). The primary goal of architectural education is to produce a uniform product of professionals armed with several marketable skills, so it is easy to work on a concept of an undifferentiated mass of students (Larson & Larson, 1979). Crysler (1995) criticized the teaching methods in architecture by saying that it

treats students as “empty vessels” ready to be poured knowledge by the teachers who act as “full vessels” and control access to what students need to become “full” themselves. Therefore, it is a very crucial factor to decide which faculty member to identify with in school because in doing so, students are deciding on the type of cultural capital he or she will accumulate (Bourdieu 1988).

Paker Kahvecioğlu (2007) pointed out that the role of the tutor in the design studio should be of mediator and moderator rather than a manager or director. They should maintain the studio as a creative space for knowledge transfer among peers, with tutors and students being active participants. Barekowski (2007) states that architectural design is about the choices architects make and the criterion they select to build the framework that evaluates their performance and results. So, the social and psychological background of a student (that defines habitus) plays the most vital role in determining their style of learning and practicing architecture.

4.9 Architectural Review

As discussed earlier, architectural education has moved in history from an apprenticeship model to an academy model. Therefore, in contrast to the discretion of the individual master, the new system of education required an institutionally accepted objective and fair method for the evaluation of students’ performance. Hence, Ecole des Beaus Arts adopted a jury or review system in the 19th century to carry out the assessment (Webster, 2005) this practice is also often identified as “Crit”, short from critique. Doidge et al. (2007) extensively discussed the importance of review as a learning activity for students.

The jury of the review consists of a panel of experts. Students represent their work to the panel and defend it in a given period, the panel then makes a collective judgment about the nature of work presented. This system of assessment by proxy was subsequently implemented in all schools of architecture and has proved remarkably resilient. Vowles in Nicol & Pilling (2005, Ch. 26) argues that “hidden social rituals in the architectural review influence both what and how students learn and what attitude and skills they carry forward into architectural practice”.

The worldwide acceptance of this conventional review method means that the values it maintains are unchallenged and received uncritically (Doidge et al., 2007). One aspect of crit both staff and students appreciate is that it provides an opportunity for focus and deadline for completing the work (Sara and Parnell, 2013). However, this assessment method means different things to staff and students. The staff perceives it to be a highly valued method of collective dialogue and objective assessment, and students find it a tutor-centered pseudo-mystical tradition that provokes feelings of fear and disappointment.

Helena Webster (2005, 2006, and 2007) has done extensive research to understand the effects of this ritual on students with some fascinating outcomes. According to her, students believe the architectural review to be an essential ritual for several reasons. First, it is a historical tradition in schools; there are stories in the schools passed down by the generation of students about incidents in the review, so taking part in the review means experiencing the legitimacy of a tradition. Secondly, it is a daylong public event that makes it different from normal day-to-day learning activity; mostly it is the first time in the semester students get to see the work of their peers. Third and the most important reason to give reviews such a high value is that professionals and experts from the field are invited to evaluate students' work which can be the first step to real opportunities in professional life. Webster believes that the architectural review is a ritual in which the architectural community (represented by the reviewers) legitimize students' progress towards full membership of the community, coach them with correct notion of becoming an architect, and it legitimizes the students' conceptual thinking by being judged against reviewer's discourse.

There are no two opinions in the literature about the importance of review in architectural education. However, it is also sometimes identified as an unfair practice in many respects. Sara and Parnell (2013) claimed that fear and stress is the most consistent experience for most students experiencing the review. Vowles (Nicol and Pilling, 2000; p-259) has described crit as a legitimation procedure; he identified that the whole process of crit is a mystified ritual, and the focus is not on learning, rather on the social acceptance of the design and the designer. These reviews are considered a source of inculcation and legitimation of architectural communication, both in the form of drawings and language for acculturation

into the architectural community's habitus. Students tell the reviewers their ideas and use their drawings to objectify their verbal description. As a result, the students who represent good drawing skills and use architectural language (or in Webster's words "architectural jargon") are considered to possess architectural habitus and are well received by the reviewers (Webster 2007).

However, there are also students with good project work but they fail to present it with confidence to the reviewers; these students believe that the review system favours those who are naturally extrovert and confident. The ritual requires students to act self-assuredly and mostly to agree with the reviewer, even if some of them complain that they did not fully understand the message of reviewers or did not agree with the comments. Students explained this passive behaviour as 'wanting to get the review over', 'not wanting to look stupid', 'fear of breaking down in front of reviewer' and most negatively 'what is the point, reviewers are always right because they mark your work' (Webster 2006). A review is often identified by students as an event to survive and not an important learning event as teachers perceive them (Doidge et al., 2007). Ahrentzen & Anthony (1993) says that the traditional design jury procedure exhibits the patriarchal, hierarchical, and rigid relationship between students and faculty. It was seen that students subordinate their pre-existing habitus in favour of the habitus of their tutor, the confident students pre-possessing the architectural habitus were seen to be more proactive during juries, for them, the review became more of a dialogue between equals.

The setting of the architectural design jury suggests an offensive inquiry ending with judgment and grades on behalf of jurors and a case presentation and defensive response on behalf of the students (Salama & El-Attar, 2010).

Many students claim that they never "got a good crit", which means a criticism that was positive, specific, and possibly disclosed a way to improve the design (Cuff 1992). Dutton (1991) also explains the jury as a tool of oppression, saying that juries operate in a discouraging manner where reviewers act to find the student guilty of anything punishable and make them stand silent as the sentence is read. It symbolizes the unequal distribution of power in the architectural school. In July 1992, an Architectural review committee established in Carleton University in Ottawa, Canada, investigated the reports of psychological abuse in

the school. They noted instances of verbal abuse, foul language, and adverse comments at the end of semester juries, and in the final report, they criticized the school's faculty for sexist and discriminatory behaviour (Crysler, 1995). Anthony (1991) criticizes design juries by saying that even though students' grades of design projects are dependent on these juries, there are no instructions for them on how to go through this grueling emotional experience. Also, for the other group participating in the critique, the staff or visiting reviewers, there is no training or instruction for them on how to conduct juries. This whole tradition of review has different impacts on different students based upon their habitus (webster, 2005). Olweny (2020) recommends four points for improving the effectiveness of the practice of architectural review. 1) guiding teachers about good teaching and assessment practices, 2) making sure that students are completely aware of the project learning goals, 3) giving an option for alternative presentation approach, 4) encouraging teachers and students' participation in all activities of the design studio.

4.10 Social discrimination

The available literature on social discrimination in architecture is not very broad, as Stevens (2002) mentioned it could all be read in one day. A lot of this literature is focused on gender studies, Ahrentzen & Anthony (1993) claimed that there is a strong indication of sexist practice in architectural education in literature. They indicated that in the classroom environment, female and male students are treated differently. Also, the nature of curriculum and teaching practice itself often reflect and promote male-centered actions. In her book "Designing for Diversity", Anthony (2001) explored the experiences of underrepresented architects, including women and persons of colour, and discussed the examples of racism and sexism in the profession. She used the term glass ceiling in architecture to identify the invisible but real issues faced by women and people of colour to occupy higher positions in the profession.

Dutton (1991) compiled a collection of voices of different people experiencing social discrimination during their time in the school. Among these voices, an undergraduate student from a school in the USA talked about her observation of the lack of female projection in the

curriculum. She states that women designers are virtually invisible in the architecture history classes, even though there is a lot written about them.

Groat & Ahrentzen (1996) claims that women must be “better” than men to be considered “equal”. This social discrimination does not limit itself to gender issues only; rather it extends to racism and classism as well. In December 2015, RIBA investigates architect Elsie Owusu’s allegations of institutional racism. She claimed that racist, classist, and sexist discrimination runs through architecture “like a stick of rock”, and it starts at the top. A woman in Dutton’s collection (1991) expresses the same feelings by saying that

“As a woman seriously concerned with social issues, I felt marginalized..... to me the architecture program was a classic case of institutional and personal racism, sexism, and elitism”.

Another student voiced her experience of racism in the design studio by claiming that she was being groomed in architecture on different lines from her peers based upon her ethnic and social background. Some of her class fellows were encouraged to explore develop and grow, as they were expected to be the designers of “high architecture”, while she was expected to design in the area of “social architecture”. She said that it was difficult for the tutors to accept that “coming from a deprived background I could be driven by the same quest for excellence”. This dual standard is confirming Stevens (2002) claim that architecture is divided into the fields of mass production and restricted production.

It is believed that the architectural curriculum can be narrow in its approach, as it is mostly based on the Eurocentric context with most examples of glorified architecture belonging to this region (Dutton 1991). The problem with this approach is that the western tradition is represented monolithically as culturally dominant, and the students that are part of this white culture are considered to be privileged. The studio instructors are also believed to be non-sensitive to social issues and architects’ role in those issues. A student pointed out in Dutton’s collection (1991) that in her three-year study in the architecture program, the design curriculum and faculty offered few opportunities to integrate social issues into the studio projects. It is believed that architecture provides the spatial and territorial conditions for racism and classism to exercise itself as it bases its legitimation on glorifying buildings instead of people, and it is deep-rooted in architects’ perception of their role in society. Architects are

considered to be not socially-minded, giving value to the creative aspects more than societal needs (Stevens, 2002). And as a by-product of this ideology, they do not value the social problems of their students and peers in the design studio. Instead, the whole system of legitimation of architectural discourse is based on supporting the students from the privileged social background.

Stevens (2002) identifies six ways in which the studio system works in “favouring the favoured”. 1) It makes the disadvantaged eliminate themselves from architectural education, as the goals in the studio may seem too high for students with low cultural capital. 2) It consecrates privilege by teaching and transmitting the culture of the dominant class, and by defining excellence and achievement in terms of that culture. 3) giftedness is an accepted and acknowledged ideology in schools. 4) Schools ignore their inculcation function. It is argued and accepted that the only way for students to socialize into architecture culture is through being part of it for a long time, and slowly soaking up from those who are already cultivated. 5) The studio system favours the cultivated habitus. 6) Schools’ system favours those who favour them, by both successfully enculturating and removing those who will not be enculturated. Students change themselves in their time in the school to be more alike, to gain the accepted architectural dispositions as it is considered to be the only way to success. Architectural schools practice this type of passive acceptance by keeping the students in a permanent state of insecure expectation. This social discrimination does not only affect students’ success within the school but also projects on their careers. As Orr & Gao (2013) mentioned students with a privileged background not only acquire a high score in the school of architecture but also their connections in the field of architectural practice create more opportunities for them. Making it easier for them to find placement in a respectable architectural office.

It is highly evident from the literature review that there is a vigorous existence of social discrimination in all aspects of architectural education. Dutton (1991) says that it is no longer appropriate to refer to architectural knowledge as independent of issues of class, race, or gender, it is highly related to a students’ habitus.

4.11 Learning Experiences and Approaches in Architectural Education

Most research on architectural education is focused on design studio pedagogy, along with the architectural review. Almost all the research discussed in this chapter that includes learners is focused on their social experiences with few exceptions. However, there is another dimension of literature on architectural education that investigates students learning experiences and approaches in the school of architecture, few examples of this literature are discussed in the factors defining the success (section 4.6.4). Although not very vast, the body of knowledge on this issue is essential for the current study.

Roberts (2004) explored how students' cognitive style measured by Riding's cognitive style analysis relates to their performance at several stages of the design project. He concluded that "contrary to assumptions found in the literature, those with a preference for thinking in a holistic, global manner, perform less well than their peers in the early stages of their education, but tend to improve as they progress through their education". Students learning experiences in architecture are explored by Lueth (2008) through qualitative interviews, he concluded that learning in architecture is an interrelation experience, meaning it is both self-driven and interdependent. Moreover, he identified that learning experiences have a transitional effect on students, as they transform themselves to be architects through these experiences. Demirbas & Demirkan (2008) explored the learning style of freshmen design students using Kolb's experiential learning model. They concluded that first-year students have better behavioural skills as compare to perceptual learning skills; also, these students are more comfortable with analytical skills and use logic instead of their feelings. Iyer (2018) classified the approaches of learning in architecture through a very elaborated Phenomenographic study in four schools of architecture. He reflected on why these approaches develop during the five years of study in the school of architecture. The result is the meta categories of students learning approaches running from surface to deeper range showing how different learning practices by students result in diverse learning approaches. Al Maani (2019) explored the experiences of students in the first year while transforming to be independent learners in the design studio. She concluded that the learning style of the design

studio facilitates students to be independent learners, and most of them showed content with the learning environment of the school of architecture.

4.12 Discussion

As explained in the second chapter (section 2.14), a field is a scheme of social positions, structured internally in terms of power relationships. This chapter explored what these positions are in the field of architectural education and how they constitute the power relationship.

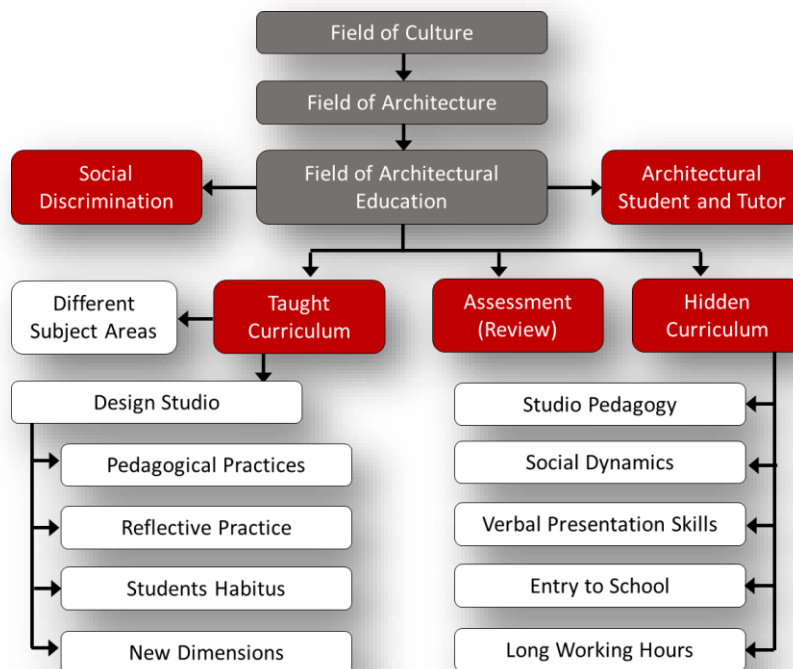


Figure 4-2: Structure of the chapter

Figure 4-2 explains the structure of this chapter, the field of architectural education that is a subfield of architecture and culture is identified to possess three interlocking and overlapping aspects or in Bourdieu's term spaces. These are taught curriculum, hidden curriculum, and the assessment or review. These spaces are inhabited by institutions, teachers, and students. Each one of these possesses a social position that characterize their power in the field. Institutions follow the laws and rules of practices developed in the field over the years, meanwhile, they define the internal rules of practices to be followed by the teachers and

students. They also compete to legitimize their practices by enabling their institutional habitus.

Similarly, teachers follow the rules set by the institutions and set further rules for students; they compete within institutions to legitimize their practices based upon their habitus. They also reward the students whose habitus is closer to theirs, under the perception that these students are creative geniuses (Stevens, 2002). As it is clear from the literature that in the field of architectural education, this power relationship works most evidently in the design studio, and it can be observed clearly under the aspects of the hidden curriculum.

The Doxa (section 2.13) of this field that is the popular opinion or common belief is that some students possess inherent personality attributes or talent by birth to be architects and that is why they perform better in the crits and studio learning. This practice is highly criticized in the literature (Stevens, 2002), but still it is the most common belief in the schools of architecture as discussed in this chapter under social discrimination (section 4.10). The literature identifies that social discrimination is deep-rooted in the field of architecture and is practiced not only based on socio-economic class, but also race, ethnicity, and gender. The prevailing norms, behaviour, and expectations of achievement in professional practice represent the implicit doxa embedded in the habitus of architectural education. There can be a potentially conflicting doxa between architectural habitus and habitus of individual students which might hinder their path to success, or there can be a consistent doxa between these two making the path to success easier.

The aspects of the field of architectural education discussed in this chapter are often related to students learning experiences, but most of these descriptions are based on observations or focused on just one aspect of learning such as the review. Meanwhile, comprehensive research on students learning experiences and approaches does not investigate the role of student's habitus and cultural capital. The critical reflection in this chapter on the social practices in the field of architectural education also linked various practices of the field to student's habitus, but it fails to relate these concepts to students learning approaches. Because there is no evidence or data in the literature identifying how students learning

approaches might occupy a position in the field of architectural education concerning their social background. This is a huge gap in knowledge in the field of architectural education.

Figure 4-3 explains how the concepts associated with the field of architectural education help to investigate certain aspects of the current study. It defines the characteristics of architectural education which helps to investigate the institutional habitus of the schools involved in the study; this is done in chapter 7. It also helps to understand the learning experiences and approaches of students with different aspects of architectural education relating to their cultural capital and habitus, performed in chapters 8 and 9 respectively.

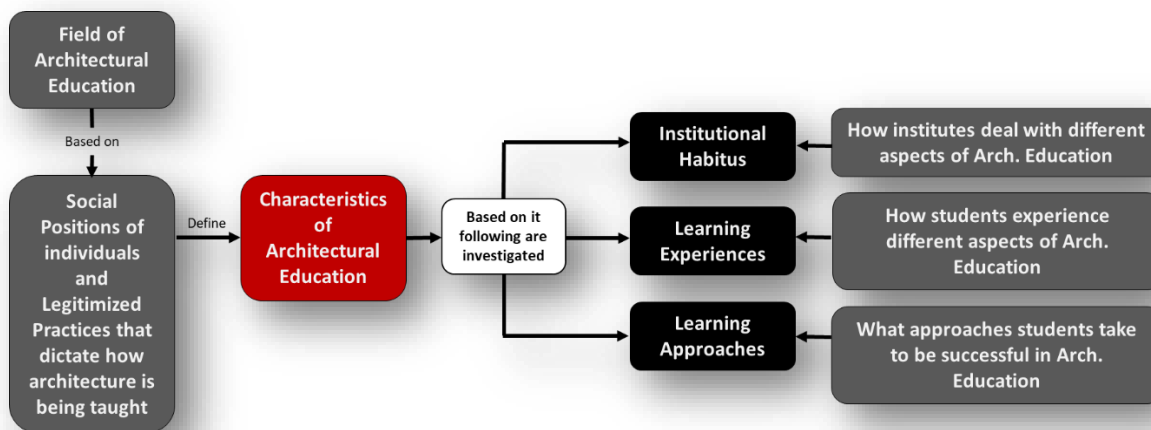


Figure 4-3: Characteristics of Architectural Education define different aspects of this study

4.13 Conclusion

Most research in architectural education is focused on design studio pedagogy along with the architectural review. Almost all the research discussed in this chapter that includes learners is focused on their social experiences while learning in the school of Architecture with few exceptions. However, there is another dimension of literature on architectural education that investigates students learning experiences and approaches in the school of architecture, few examples of this literature are discussed in the factors defining the success (section 4.6.4). Although not very vast, the body of knowledge on this issue is essential for the current study as it is focused on the same aspect of architectural education, investigated in comparison to students' social background.

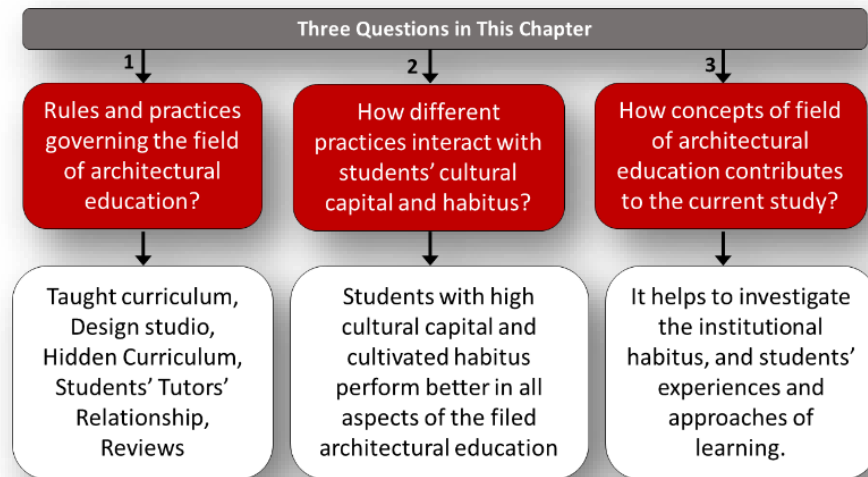


Figure 4-4: Answers to the three questions mentioned in the introduction

Figure 4.4 answers the three questions mentioned in the introduction in figure 4.1. In this chapter, several studies have been discussed regarding the transformation that occurs as part of architectural education. These studies discuss design studio pedagogy and studio culture, critical review, context, and setting and program. This description of the field of architectural education answers the first question for this chapter. The investigations in this chapter lead to the conclusion that students' cultural capital and habitus play a major role in defining the possibility of success in architectural education. It defines their path of learning in the school of architecture, students with different habitus and cultural capital behave in different ways even when provided a common learning environment and given similar instructions, because of the difference in their perception. They experience studio pedagogy uniquely, they relate to different parts of the architectural curriculum, they associate with the diversity of hidden curriculum individually, they are affected by architectural review distinctly, and they take diverse positions while relating with the social milieu of the field of architectural education. This explanation answers the second question mentioned in the introduction, as mentioned in Figure 4.4. It also shows that the understanding of the characteristics of architectural education defined through the field help to investigate certain aspects of the current study, including the institutional habitus of the schools involved in the study and students'

experiences and approaches with learning in the school of architecture. This answers the third question mentioned in the introduction (Figure 4-4).

Based on Figure 1-1, Figure 4-5 maps the research in architectural education that informs the characteristics of the field of architectural education. Figure 4.6 maps the research on inequality in architectural education that describes social discrimination in the field of architectural education. Figure 4-7 maps the little available literature on learning experiences and approaches in the field of architectural education.

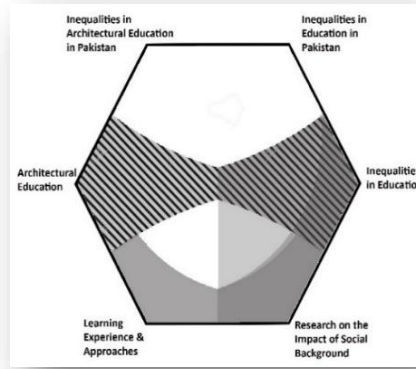
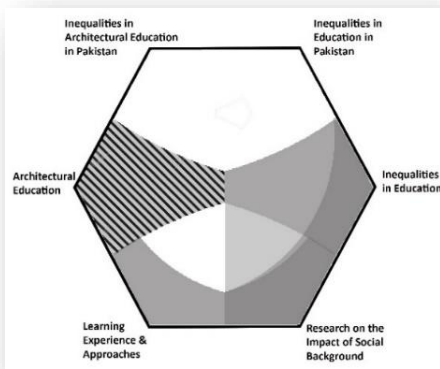


Figure 4-5: Research on architectural education

Figure 4-6: Research on Inequality in Architectural Education

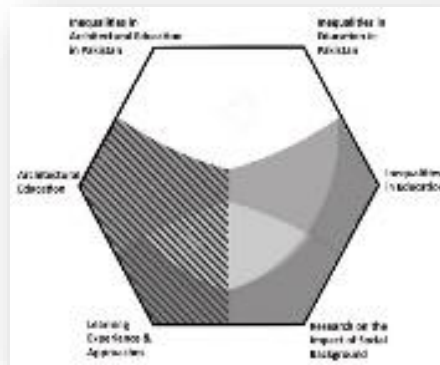


Figure 4-7: Research in learning experiences and approaches in Architecture

CHAPTER FIVE

Social inequality and Architectural Education in Pakistan

5 Social inequality and Architectural Education in Pakistan

5.1 Introduction

This chapter seeks to understand the scenario of social inequality in Pakistan and how it is playing a role in architectural education. In the second chapter, cultural capital and habitus were identified as the main determinants to explore the role of social inequality in education. Encompassing these concepts, this chapter is focused on exploring three critical questions, as explained in Figure 5.1. These questions are, is there enough evidence for the presence of varying levels of cultural capital and habitus in the architecture schools of Pakistan? What factors are responsible for producing these variations? Does this variation affect students' performance in higher education, or for this particular study in architectural education? This chapter seeks to explore these questions through a pilot study based on semi-structured interviews with 14 design teachers in 4 architectural schools of Pakistan.

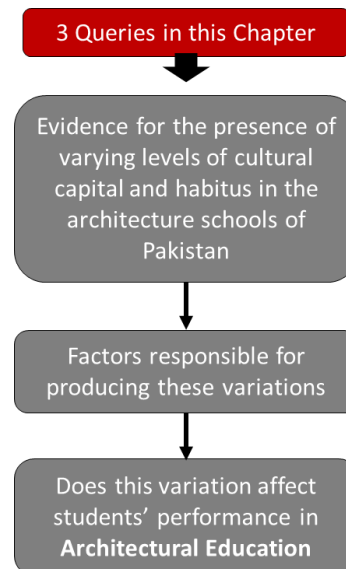


Figure 5-1: Queries in this Chapter

5.2 Why a Pilot study

A significant amount of research explores social disparity in Pakistan and its role in early education. Research identifies the inequality in early education in terms of quality of education and access to the English language, also explains that these transforms into social disparity and class in Pakistan (Andrabi, Das, and Khwaja 2002; Rahman 2004). However, the learning behaviour of students in higher education while coming from different social backgrounds is never studied in Pakistan.

There is no data in the literature on the role played by early education and other factors shaping up student's personalities. As mentioned before, these roles are explored in literature through Bourdieu's theory of cultural reproduction, this is identified as the most relevant theory for this study as well (section 2.8). However, this theory is hardly ever been used in a society like Pakistan. The most relevant study about this stance is by Arnot & Naveed (2014),

as they explored the rural family habitus in Pakistan and explained that poverty in the rural areas of Punjab, Pakistan defines the habitus of families that strongly influence the chance of success in education for their young members.

As discussed in chapter 4, architectural education is expected to be affected by students' social background and grooming. This education is not based on the simple imparting of knowledge and skills necessary for practice, but because of its creative nature, it is susceptible to being affected by social inequality (Dutton 1991). There is some focus on this issue of inequality in architectural education in the last two decades, but it is limited to western societies only (Payne 2015; Stevens 1995, 2002; Webster 2005, 2006, 2007). In developing countries like Pakistan, the issue of inequality in education is much worse (Siddiqui 2012) and is expected to have more impact on students' learning behaviour.

The pilot study discussed in this chapter focuses on the possibility of the impact of students' social background on their learning experience in the society of Pakistan. The objective is to identify the evidence of social segregation resulting in a varying level of cultural understanding and personality dispositions affecting the learning of architecture. This study attempts to do so by comprehending the learning scenario in four architectural schools of Lahore, that is explored through teachers' perception.

5.3 Objectives for the Pilot study

Based on the questions mentioned in Figure 5.1, there are three objectives for this pilot study.

- To understand if the theory of cultural reproduction is a suitable notion for the exploration of the impact of social inequality in Pakistan.
- To investigate what are the factors shaping up the cultural capital and habitus in the society of Pakistan.
- To explore if there is enough evidence for the impact of cultural capital and habitus on the learning experiences of students in architectural education.

5.4 Education and class in Pakistan

The focus of this research is to determine how architectural education is affected by social factors. Therefore, it is imperative to understand the social scenario of Pakistan regarding

education. It is believed that a society's well-being and success are deeply dependent on education, and the quality of life is seen to be improved with better education (Behrman, Ross, and Sabot 2008). In a society like Pakistan, where discrimination based on ethnicity, patronage, and socio-economic class is practiced to a great extent, progressive social changes can only be brought through education (Kalia 2015). Lack of education is seen as the root cause for all social evils in Pakistan (Memon, 2007), it is also considered to be the most influential cause of poverty, and the chances of poverty can be significantly reduced by improving education (Qureshi & Arif 2001). Education is supposed to work as an equaliser in society by providing everyone knowledge, skills, and the ability of critical thinking, but this is not what is happening in Pakistan (Memon 2006; Rahman 2004). Siddiqui (2012) suggests that education, which is believed to be a tool of freedom and success, is in fact involved in further broadening the socio-economic gaps in Pakistani society.

Sutoris (2020) explains that poverty in South Asian countries affects access to and quality of education. Education in Pakistan is exceedingly divided and socially stratified at all levels, including primary, middle, secondary, and higher education (Khalid and Khan 2006). This stratification starts and has the most devastating effects at the primary school level because this is the time a young person's personality develops to the maximum. Throughout their life, they behave in consonance with the grooming they received at an early level of education (Bissoli 2014; Heckman 2011). Public-sector schools in Pakistan have failed to cater to the needs of education for a growing population (Andrabi, Das, and Khwaja 2006; Rahman 2004). Moreover, the quality of education provided by these schools is extremely poor (Alderman, Orazem, and Paterno 2001; Andrabi, Das, and Khwaja 2002; Aslam 2009). Therefore, to cater to the need of the population, a significant number of private schools are operating in Pakistan. From 1983 to 2000 the number of private schools in Pakistan increased by 10 times (Andrabi, Das, and Khwaja 2002) and this number is on an increase by the year. These are privately owned for-profit schools with no central control, system, or regulations, so they vary significantly in the quality of education. These schools charge their 'customers' in relation to the quality they provide, making it possible for the rich to have the best quality of education

(Andrabi, Das, and Khwaja 2002; Aslam 2009; Memon 2007). Figure 5.2 shows an overview of the educational system from primary school through to university.



Figure 5-2: Education system in Pakistan from early education to architectural education

Another important aspect associated with school education in Pakistan is the medium of instruction; education here is bilingual, with English and Urdu as the main languages. The majority of the population communicates in Urdu, but English is considered the symbol of social status and power in Pakistan, it is a powerful instrument for socio-economic mobility (Mansoor et al. 2005; Mehboob 2002; Rahman 2004b, 2005). Preying on parents' desire for their kids to have a good grip on the English language, many low-budget private schools claim

to be in the English medium. But the de facto mode of communication in these schools is always Urdu, providing little exposure to the English language (Manan, Dumanig, and Davis 2017). Only good-quality expensive private schools are found to be able to give students a good grip on the English language; these are the schools accessible only to a tiny elite class of society. Hence, English remains the language of power and upper social status in Pakistan (Rahman 1997).

5.5 Secondary Education in Pakistan

Another major aspect that divides the education system of Pakistan, is the two types of secondary education. These are known as “Matriculation and intermediate” or matric and FSc, and “Ordinary and Advanced levels” or O and A levels. Secondary education in Pakistan starts from the 9th grade and lasts for four years, after this, students enter the tertiary phase that is university education. After completing the 8 years of education in schools and upon entering the secondary phase, students can choose which type of secondary education they want to take. Matriculation and Intermediate is the national examination framework and managed by the “Board of Intermediate and Secondary Education” commonly known as BISE. Whereas O and A levels are managed by “Cambridge International Education” also known as CIE UK. One is the local education system, and the other is internationally recognised. However, this is not the only difference. There are significant differences in the syllabus and teaching pedagogies of these two systems. O and A level education is comprehensive, and concept-based, whereas the BISE system is identified to be based on rote learning with a focus on quantity rather than quality (Ishfaq, 2019; Raja, 2019).

Moreover, the BISE system is very strictly defined in terms of the options of subjects, divided into two categories of science and arts subjects. Whereas, in O and A levels students can choose from a range of optional subjects which better prepare them for a range of university subject areas. Despite its reputation of a better system, only 3% of students in Pakistan complete their secondary education under O and A levels. The primary defining factor is finances, O and A levels education is significantly expensive, and the only handful of institutions in Pakistan are providing this education. So, this form of education is only available to a small percentage of the elite in Pakistani society (Ishfaq, 2009).

Other than BISE, and O and A levels education system, there is a third system that is not part of mainstream education. It is called the Diploma of Associate Engineering or DAE and is a three-year post-secondary program offered in various engineering disciplines and architecture. This diploma is offered at a handful of government training institutions, individuals getting this diploma work as technicians, site supervisors, sub-engineers, operators, and draftsman in their career. Families who cannot afford a full professional degree prefer this program for their young members. However, there is a possibility of further education; almost all universities have reserved seats for students with this diploma to get admission in different professional disciplines. These seats usually are very few, for example, 1 or 2 seats for a class of 40, so very few students entering this education system end up in university. However, there is not much competition on these seats, because mostly these students cannot afford a university education.

5.6 Architectural Education in Pakistan

Architecture is not a very high valued profession in Pakistan, Zahir-ud Deen Khwaja a renowned architect in Pakistan, discussed the reason for it in his keynote address to the National Workshop on Architectural Education held in 1984, he said:

“In the British colonial days, in this Subcontinent, traditionally, only the engineer was used for the purpose of carrying out various development projects. It was, therefore, natural that when, towards the latter part of the British rule, architects’ services were mobilised with the object of leaving architectural monuments in the Empire, the role of the architect was clearly subservient to that of the engineer.”

Even now architects work in a subservient position in most public sector agencies. As a result of this approach, there is not a broad acceptance, acknowledgment, and awareness for the profession in society, therefore not many people are attracted to the profession. Most people entering architectural education in public sector universities do so only if they do not have other options available. For the student who wishes to study architecture, the general admission criteria are set by the rules framed for admission to the various branches of engineering at engineering schools, that happen to be the host of architecture and planning faculties. Furthermore, most of the time this admission criterion is the performance in high school in pure science subjects (Ahmed, 1986). This approach is changing in recent years as many schools now conduct aptitude tests for architecture.

At the time of Pakistan's independence in 1947, there were only a handful of architects in the country, at the most half a dozen. There was not yet a proper school of architecture in the country, except for the architectural section at the Mayo School of Arts (now known as the National College of Arts, Lahore), where students were trained to assist in architectural firms. The importance of the role played by the architects in the national development was highlighted for the first time in a three-day national seminar in 1979 on the theme "Architecture and National Development", held at the Department of Architecture, Dawood College of Engineering and Technology, Karachi (Ahmed, 1986). Up till 1990, there were four fully-fledged schools of Architecture offering degree courses in the country, two in Lahore, one in Karachi, and Jamshoro. With the advent of the 21st century, there was a mushrooming growth of schools of architecture, especially in the city of Lahore (Naz 2008). Now there are more than 20 accredited architectural schools in the country with 12 schools only in Lahore, attracting students with various social backgrounds.

Architectural education in Pakistan is regulated by two professional bodies. One is Higher Education Commission (HEC) that maintains quality control in universities for all subject areas. It makes sure that universities are following the international standards for pedagogic interactions, examinations, and assessments along with the maintenance of physical learning spaces. It also controls the quality control in terms of staff appointments and promotions. The second professional body is the Pakistan Council of Architects and Town Planners (PCATP). This body controls the quality of architectural education in particular by defining the curriculum for architectural schools and providing guidelines for pedagogy. It also provides the official accreditation to the schools of architecture, enabling them to award architectural degrees to its students. For this accreditation, it provides guidelines to the schools and then plans periodical visits, based upon the school's performance one- or two-years accreditation is awarded. All graduates from the schools of architecture also need to get PCATP membership to practice as an architect. All accredited schools' graduates can get this membership by following some steps defined by PCATP.

5.7 Theory of Cultural Reproduction in Pakistani Society

The theory of cultural reproduction comprised of the concepts of cultural capital, habitus, and field is identified as the theoretical base on which the social inequality in education is investigated (Chapter 2). This pilot study is focused on identifying the role of these concepts in Pakistani society. Theoretically explaining, Pakistani society is expected to produce individuals with greatly varying cultural capital by possessing strongly divided social classes and an extremely stratified education system. Carraro (2004) pointed out that social discrimination in Pakistan is affecting people's way of life and their chances of success and progress in all aspects of life. This discrimination leads to strongly isolated ways of living. Individuals belonging to families with high socio-economic status acquire high cultural capital by having access to more cultural activities. This high cultural capital becomes a part of their habitus, in contrast to the students from lower socio-economic status, having a habitus of lower cultural capital. This contrast defines their path of learning and success in the field of higher education.

Social class has a more drastic impact in a country like Pakistan where public-sector institutes do not provide quality services, and people must purchase even necessities of life, including education. As explained earlier, schools and higher education institutes are not contributing to overcome social discrimination, as education in Pakistan itself is extremely stratified based on the socio-economic status of families. Upon entering higher education, students from wealthy families have an added advantage over students from lower social backgrounds, who enter the universities because of their hard work and high scores in secondary examinations. However, they always lack the necessary grooming and communication skills (identified as habitus by Bourdieu) required to excel in higher education, especially in architectural education. These theoretical assumptions are at the heart of the investigation in this pilot study.

5.8 Context and research design for the Pilot Study

This pilot study is already published in the "British Journal of Sociology of Education" under the title "Teachers' perception of students' performance in the architectural design studio in

the light of Bourdieu". The meaning behind the use of terms upper, middle, and lower social class in the thesis and this pilot study is explained in the second chapter (section 2.3).

5.8.1 Context of the study

The teachers' perspective of students' performance in relation to their social background was investigated in four architectural schools of Lahore, Pakistan. Lahore is an important city in terms of architectural learning in Pakistan and as a social unit for several reasons. It is the home of the first architectural institutes in Pakistan, and 12 out of 20 accredited architectural schools in the country are situated in Lahore, making it the city with the most architectural schools. Moreover, Lahore is the second biggest city of the country in terms of population and is the capital of Punjab that is the biggest province of Pakistan, the house of 53% population of the country according to the 2017 population census. Students from Lahore, from all over Punjab, and from other regions of the country come to study in the architectural schools of Lahore. So, there is a wide range of social backgrounds, making Lahore the right choice for this study.

5.8.2 Research Design

For this study, in-depth semi-structured interviews were conducted with teachers from four architectural schools in Lahore. Since the purpose of this study is to understand teachers' perception of students learning experiences, the interview questions were designed for teachers to reflect on this topic through their own experiences. Semi-structured interviews provided the opportunity for heterogeneous conversation, making it possible to understand the teachers' perspectives with much more depth. However, the fixed points of discussion determining the structure of interviews are explained in the next section.

A total of 14 teachers were interviewed, out of which seven belong to two schools from public-sector universities and the remaining seven belong to two schools from private-sector universities. For convenience, these will be identified as schools A, B, C, and D, out of which schools A and B belong to the public sector and schools C and D belong to the private sector. The admission policy and accumulated semester fee for each school as given on the official school websites are presented in Table 5.1. These four institutes practice different admission policies and have different fee structures; as a result, they attract students from diverse social

backgrounds, making them the right choice for this study. Teachers from these institutes were contacted, and the research and its objectives explained; those who agreed to talk were interviewed in detail using Skype, each interview lasted from 40 to 60 minutes.

School Label	Sector	Fee Per Semester (British Pounds)	Admission Policy
A	Public	70	1st Division in secondary education (60%) + Entry Test (Combined for Eng. and Arch.)
B	Public	650	2nd Division in secondary education (45%) + Aptitude Test +Mathematics Test +Interview
C	Private	1044	2nd Division in secondary education (45%) + Aptitude Test + Interview
D	Private	1500	2nd Division in secondary education (45%) + Aptitude Test + Interview

Table 5.1: Information about schools (accessed in September 2018)

5.8.3 Points of discussion for the interviews

The starting point of discussion with all teachers is their perception of the importance of the social background of students in design studio learning. Other discussed topics in the interviews can be divided into two parts. The first part includes teachers' observation of the evident social classes of students present in the school; also, how students' social class in the form of economic and social values impacts their personality and behaviour, and how often these impacts are visible to teachers. This part helped to understand teachers' perception of students' cultural capital and habitus developed as a result of their social class. The second part includes topics to understand students' performance in the design studio and how students do or do not perform differently in the design projects while being from different social backgrounds. Students' relation to teachers as shaped up by their social grooming is also explored. This part helped to understand teachers' perception of the relation of students' cultural capital with their performance in the school. Interviews were conducted using English and Urdu languages, as teachers routinely communicate in architectural schools using both languages. All interviews were recorded. and transcribed with complete English translation.

5.8.4 Coding Process

The findings of the interview were coded and analysed using NVivo 11 (a type of computer-aided qualitative data analysis software). Coding is the process of gathering information regarding anyone theme or question in one place in the software called “node”. The coding process was facilitated by this software by providing structure and organisation to the data. In the first instance, provisional coding is done, this is the method to create a list by the researcher for identifying the themes that might appear in the data before the actual coding is done (Saldaña, 2015). The provisional coding list is devised based on the objectives of the study (section 5.3). These concepts help to understand how Bourdieu’s theories make sense in the schools of architecture in Pakistan, as explained in the findings of this study.

After the provisional coding, an “Eclectic coding” is done to identify emerging themes from the data. Eclectic coding is the process to investigate the data based on the provisional coding list; it explores if the themes identified in the list are appearing in the data, also what new themes are emerging that are not mentioned in the provisional coding (Saldaña, 2015). Eclectic coding is not random; instead, it is purposeful to make sense of the data based on the investigation points, it is the link between the first cycle of coding, in this case, the “provisional coding list” and the second cycle of coding in which all coding points are reviewed. After eclectic coding is completed, it is then peer-reviewed for the elimination of any research bias. It is done by sharing the coding process and emerged codes with the PhD supervisor and a colleague. Finally, second-cycle coding was done by careful review of all themes and by reviewing the transcribed interviews to make sure no crucial points are left out.

This study is based on a case-study approach with ‘individuals’ as cases (Yin 2014). Strauss and Corbin (1998) explained that although data saturation is probably never achieved, theory structuration can be based on a detailed analysis of at least 10 interviews or observations. In the present study, 14 interviews were conducted as they were divided into four schools, and the minimum number of interviews sufficing to understand learning practices at one school was found to be three. However, teachers at schools B and C were found more responsive and supportive for interviews, so four interviews were conducted at both of these schools, contributing to a total of 14.

During the eclectic coding process, fewer new themes emerged in the last few interviews; also, emerging topics in the last few interviews corroborated the previous themes, signifying practical saturation.

5.9 Findings of the Pilot Study

Findings revealed from the teachers' interviews are analysed using Bourdieu's theory of reproduction and its relation to education and learning. These findings are broadly discussed based on two factors. First, to understand teachers' perceptions of students' social background and its impact on their personality that helps to understand teachers' perceptions of students' cultural capital. Second, to understand the social background's impact on students' design performance that helps to understand teachers' perception of the impact of students' cultural capital on their architectural learning.

5.9.1 Students' social background and impacts

Most teachers interviewed in this study believe that the social background of students impacts their personality and learning behaviour. Teachers explained that it is sometimes difficult to identify how a student from a particular social class will behave in a particular situation, but they were confident that differences in behaviour and responses are surely there. Even if their first response was that they do not have a strong opinion on the matter, when investigated further they agreed that students coming from different social backgrounds behave, and sometimes learn, differently during their time in the architectural school:

It impacts their performance both directly and indirectly. Directly in the sense that it affects what kind of facilities they have, access to the internet, working space, physical environment, etc. and indirectly in the sense that their families' issues and problems can affect them psychologically, it affects their performance and working abilities.

Most teachers at schools A, B, and C strongly believe that students' social background has a definite impact on their personality and their design performance. Interestingly, all three teachers at school D said that they do not think social background has a very noticeable impact on students' personalities. When investigated further, the reason for this opinion was found to be that almost all students in this school belong to upper social class, so social diversity is

almost negligible. That is why teachers did not witness many variations that they could identify with social background. However, in the schools where a robust mix of social backgrounds is present, teachers witness significant differences in students' personalities; in the subsequent discussion, these differences are identified to have an impact on students' learning behaviour.

5.9.2 Family values and impacts

A significant majority of teachers identified the impacts of family values on students' perception of the world. Teachers expressed that early-life grooming plays a significant role and students' attitude is just a reflection of their parents' approach to life:

Students' attitudes I believe is the outcome of grooming provided by their family, their family's thinking, culture, and social practices play a major role in developing their personality.

They described that the family's thoughts and ideas shape up students' way of thinking. Students' attitude is identified to be the outcome of grooming provided by their family. For example, families who give importance to learning through any means, either books, newspapers or the internet, their young members are identified to be more creative. Some teachers also mentioned the importance of parents' education and its impacts on a child's grooming.

5.9.3 Communication skills and schooling

The most crucial factor discussed by almost all teachers in the interviews is the communication skills of students; they described that their social upbringing shapes these. Moreover, they explained that the differences in apparent personalities become more prominent when linked with communication skills. Students from the lower social background are often found to have poor communication skills and such students find it difficult to express themselves. Teachers believe that communication skill is an essential factor that can define students' chances of success in architecture, as they have to defend their design all the time; also, their grades depend upon their ability to present the work verbally. Students coming from a low social background are often found to be shy and not good communicators, so their performance in design studio gets affected by this:

Most of the time, students coming from backward areas or deprived social backgrounds have communication problems so they cannot express themselves confidently.

In this study, the first indicator of communication skills being associated with social class is that the majority of teachers at schools A, B, and C, where students come from various social backgrounds, said that only a fraction of students are good communicators and can speak well in English. On the other hand, at school D, where the majority of students belong to the upper social class, teachers said that most students are confident communicators and speak English well. A teacher at school D said:

They [students] seemed to have taken the benefit of their good social grooming; they possess strong beliefs and point of view and are good communicators.

Communication skill is strongly linked with a good grip on the English language; although teachers do not demand their students to communicate in English during discussions and presentations, they are often impressed by students who do so. English being the symbol of culture in Pakistani society (Manan, Dumanig, and David 2017), students who can speak it well also feel confident, which helps them excel in learning. Also, as discussed earlier, the ability of excellent English communication is linked with students' social background through early schooling. Teachers also supported this concept by saying they believe that students with good social background attend expensive private schools for early education, and that is why these students have good communication skills:

Students who are coming from better schooling or we can say private schools are better at communicating and engaging in dialogue as compared to students who come from public schools.

However, early education not only affects the students' ability to communicate but is also expected to affect students' learning attitude. Some teachers in this study described the early education system in Pakistan as based on the monologue, where teachers talk and students listen, and when these students enter higher education and are encouraged to engage in dialogues, they find it difficult. Students from a better social background, who have attended expensive private schools with a good quality of education are found to be more engaged in the dialog and are much more confident.

5.9.4 Learning in the School of Architecture

One critical factor that emerged from the study was the learning attitude of students from upper and lower social backgrounds as described by the teachers. Most teachers discussed the impact of students' social class on their ability to learn architecture in the school. They described that a student's life history describes the way he/she perceives and performs in architecture school, explaining that students belonging to a lower income group have focused on basic survival throughout their life, so he/she is unlikely to have a worldview of things, and this is expressed in their design as well. They also explained that students coming from a lower social background often find it challenging to understand the culture of architecture. In the beginning years, teachers must make a considerable effort with them, to make them understand even the basic concepts of architecture:

They find it difficult to understand architectural terms and definitions, so they spend a lot of time to understand the basics, and that is why other people (from the better social background) go ahead of them.

A lot of the time, such students come under an inferiority complex; they have a problem in communication because they do not have a good grip on English. Also, they sometimes face problems in understanding the literature as most of the literature is in English. However, these students were identified as having a positive attitude of learning, they adapt and change more, and they are often very hard working. These are the students who are financially not very sound and do not have very much grooming, but they want to be successful in the profession, so they are identified to be more adaptive and open to learning new things. This is not to claim that all students from a lower social class act in this manner, but this attitude is found to be more common in such students:

They know that they have to survive which drives them to work hard and have an open mind at the same time, they know that this is their chance to excel in life in contrast to some other student coming from a more fortunate background who knows that their survival does not depend on this degree only.

Students from the upper social background were identified as having a negative attitude of taking things for granted and not doing the required hard work. They are often more rigid and believe that they do not have to learn a lot or do the hard work, so a negative attitude is

developed. However, on the other hand, these students always have the upper hand over others in terms of communication and presentation skills, and because of this they often compete with them equally without putting in much hard work. Students from different social backgrounds have different strengths; those from upper social backgrounds are more aware of the social culture by having better chances of grooming in their lives. However, those with a humble social background are mostly hardworking and have an urge to learn and be successful.

5.9.5 Giftedness, exposure and transformations

All of the teachers were asked about their belief in the ideology of giftedness in architecture. A notion introduced by Stevens (2002) is that schools of architecture believe that some students are naturally gifted for learning architecture and reward such students; these are the students more familiar with the culture of architecture because of their higher cultural capital. The majority of teachers said that they believe in this idea that some students have a natural ability to learn architecture, that they are gifted. They expressed that, in general, some students are more imaginative, and they can create better spaces. Some other students produce completely flat designs; it does not matter how hard is the effort to inspire them, to think and be imaginative; they just cannot do it:

Sometimes we come across such students who make you think that they have this extra ability, some factor which cannot be taught, and the student has developed it on his/her own motivation, so I do believe that some students are gifted.

However, most teachers also added that natural talent always has to be accompanied by hard work. Also, almost all teachers pointed out one aspect that influences students' success and their natural ability for learning architecture, which is 'exposure'. Teachers believe that exposure to the world by travelling, visiting cultural places and reading helps students to excel in architecture:

Students who have more exposure meaning that they have seen many buildings, they have travelled abroad, experienced the culture of different cities, they have lived in properly designed houses, and experienced life in a well-planned society have much more awareness.

Some teachers believe that being from a more fortunate background provides the necessary means and resources that help to expand exposure, which is sometimes misconstrued for natural talent. Some other teachers said that exposure does not necessarily come with social status, and is more affected by family values and grooming. It is dependent on the ability to observe and remain connected with the world around. However, all teachers agreed that exposure plays an essential role in students' success in architectural education, and it is somewhat dependent on family's capital either by having resources to travel and see the world (economic capital) or by the focus on reading and learning (cultural capital):

Exposure does not always come from having more money or travelling more; it can also come from a book. The important thing is how much importance is given to education by your family.

Many teachers also pointed out in interviews that many students transform during their time in school. Students coming from unfortunate social backgrounds do not bring the grooming with them but being in school provides the opportunity to learn and change. Some teachers even expressed that after spending some time in the school, they often change to the extent that it becomes difficult to relate them to their previous personalities. However, this transformation is easier for students from the upper social class as they are already familiar with the dominant culture of society; they find it easier to adjust to the schools of architecture. Students from lower social class have to work extra hard to reach the same level:

Students actually learn and grow, it is not that they behave the same way they used to when they came to school, but the path is definitely accessible for students with a better social background as their schooling and social grooming have prepared them well for challenges of learning architecture.

5.9.6 Teachers' behaviour and relationships with students

Teachers were asked about their relationship with students from different social backgrounds and whether it affects their teaching and behaviour toward them. Many teachers in this study mentioned that students coming from better social backgrounds are often bolder; they are comfortable with teachers and can express their ideas and problems with more confidence and without any hesitation:

Students with better social grooming are generally more confident in their ideas and personality, so they express themselves confidently as well.

Some teachers explained the adverse outcomes of students' shyness on teacher-student relations. It was identified that unfortunately some teachers only remain focused on students who are easy to interact with. Because when students are not willing to open up it becomes difficult to develop a relationship with them, and some teachers do not bother to do the hard work for this. Teachers also gave their opinion on the most appropriate way to deal with students from diverse social backgrounds. Most of them identified that the best way to deal with shy and underconfident students is to develop friendly relations with them:

I believe that architectural education cannot be done properly without having an open and friendly relation with the students; it is not possible to communicate with them effectively without understanding their personalities and aspirations.

Teachers described that to make students overcome their shyness, they try to arrange regular discussion groups and encourage everyone to participate in them. They also explained that to have a fair marking system it is crucial to focus more on the process of design work in the studio rather than giving the final presentation much importance, where students with better grooming and communication skills often outsmart others. Teachers say that they try to judge the design projects on how well students have learned and how far they have come in comparison to the beginning of the project.

5.10 Discussion on the Pilot Study

The purpose of investigating students' practices from the teachers' point of view is to understand the depth of the situation from a neutral perspective. This study attempts to understand whether Bourdieu's concepts can be implemented in the social setup of architectural schools in Pakistan where such a kind of study has never been attempted before. So, the study looks into three important questions: is there enough evidence for the presence of varying levels of cultural capital and habitus in the architecture schools of Pakistan; what factors are responsible for producing these variations; and does this variation affect students' performance in higher education, or in this particular study in architectural education? These questions will be answered in the discussion ahead.

Teachers expressed quite explicitly in this study that students often show different social behaviours unique to the socio-economic group to which they belong. They explained that they experienced this variation in the way students carry and represent themselves. Students from a higher social class are more aware of the world around them and the culture; they possess better communication skills and are more confident. These findings indicate that these students possess higher cultural capital, as these factors are used as an indicator of a person's cultural capital by peers (Dumais and Ward 2010; Payne 2015; Wildhagen 2009). Also, it is identified by the teachers that students from higher social class have a positive self-image and have belief in their ideas, showing higher habitus, as these are the factors identified in the literature as indicators of a person's habitus (Horvat and Davis 2011). This finding answers the first question and confirms that students coming to the school of architecture show a varying level of cultural capital and habitus. However, how their habitus plays a part in architectural learning is not discussed in detail in this pilot study.

The second question investigates what gives rise to the variations in cultural capital. To answer this question, it is explored that what factors are identified by teachers that dictate students' behaviour and how Bourdieu's concepts link these factors with cultural capital. Among all of the discussed characters in this study, family values were identified by teachers to be the most crucial factor that defines students' behaviour. This notion is in line with Bourdieu's concept; he believes that a child learns to see the world through parents' eyes, the older generation in any family transfers the values to the younger generations (Bourdieu, 1977). Over the years, research has used concepts like family values about reading and art culture, and parents' education level as essential indicators of students' cultural capital (Aschaffenburg and Maas 1997; Dumais 2002; Payne 2015). In this study, teachers identifying students' behaviour in relation to their family values are essentially indicating their cultural capital. Another important factor identified by Bourdieu as shaping students' cultural capital is early education. This concept is in line with previous research that describes the quality of early education in Pakistan as being directly dependent on its cost, making it possible for the rich to buy the best education (Andrabi, Das, and Khwaja 2002; Aslam 2009; Memon 2006). So, students with higher socio-economic status in Pakistan, by having good-quality education,

enjoy higher cultural capital, which makes their path more comfortable to learn architecture. Teachers in this study also support this notion by identifying that students with good-quality early education often perform well in the design studio, and this answers the third question. The creatively demanding nature of the architectural studio makes it very difficult for students to comprehend the requirements and produce designs accordingly (Ibrahim and Utaberta 2012; Danaci 2015; Kirci 2017). Students possessing high cultural capital have an added advantage here; by having a better understanding of the culture and more exposure to art, it is easy for them to understand the culture of architecture. Also, it is easy for them to express their ideas by having better communication skills and confidence to present, a notion identified by Webster (2005) as being linked with higher cultural capital. The present study also strengthens this concept as it highlights the importance of communication skills for success in the design studio as it dictates the students' ability to defend their work and also dictates the students' and teachers' relation. All of these advantages of possessing higher cultural capital are often misunderstood as 'Giftedness' for learning architecture, as explained by Stevens (2002). In the present study, most teachers also believe that some students are naturally gifted to learn architecture. They further explain that giftedness is dependent on the good exposure that can come with travelling, reading good books, or staying up to date. Also, it is identified to be linked with family values, and the grooming students had in the initial years of their study. All these said factors add up to define the cultural capital of students and identify that those students possessing these factors, mostly owning higher cultural capital, perform better in the architecture studio and are considered gifted by teachers.

5.11 Conclusion

Derived from Figure 5.1 and based on the detailed discussion on the pilot study (section 5.9), Figure 5-3 identifies how this pilot study answers the three queries of this chapter. The pilot study concludes on the fact that students coming from different social backgrounds in the architecture schools of Pakistan show different cultural capital and habitus, which strongly influence their learning path.

Apart from some teachers showing concern for such students, there is no proper policy to make architectural education more inclusive in the schools of Pakistan. A direct implication of

this practice is that students from lower social backgrounds have a more difficult path to success in architectural schools. As a result, architecture continues to have the reputation of a rich man's profession. It is an absolute necessity of the time to make architectural schools a place where students from all segments of society can feel a sense of belonging. This change is particularly significant in a society like Pakistan, where the architectural profession needs to be more approachable for the lower segments of society to bring social and cultural sensitivity to the profession. As a teacher in this study said:

Design is always created by new and innovative ideas so we cannot be focused on one sector of society, it is the need of architectural profession in our country that students from different sectors of society should join in.

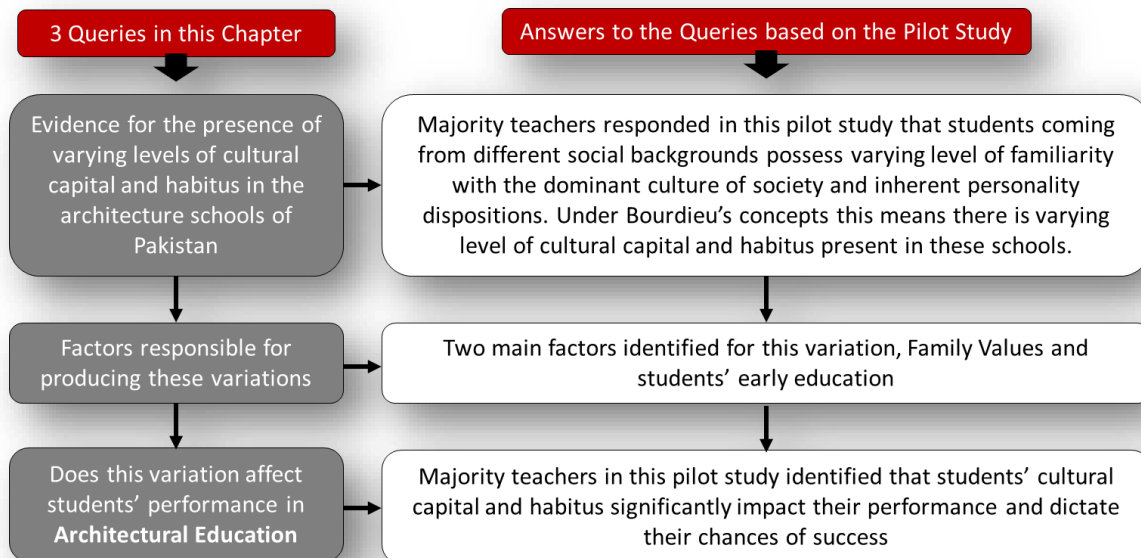


Figure 5-3: Answer to queries of this chapter based on the Pilot Study

Based on the parameters identified in Figure 1.1, Figure 5.3 maps the research on inequality in education in Pakistan. As there is no research in architectural education of Pakistan concerning students' social background, Figure 5.4 maps the pilot study on the parameters. This research identifies the differences in students' journeys of learning while coming from different social backgrounds that ultimately lead them to have different learning approaches in architecture schools. This pilot study is a starting point to identify that there is an enormous research gap in the sociology of education that needs to be investigated in terms of architectural education and other areas of education. To improve the learning experience of

students in the architecture school of Pakistan, a detailed study is required to investigate and understand students' learning approaches in relation to their cultural capital and habitus from students' perspectives.

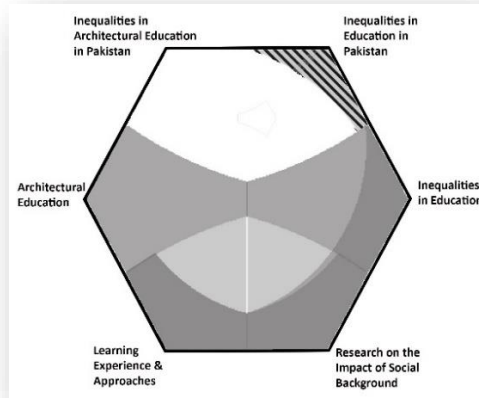


Figure 5-4: Research on inequality in Education in Pakistan

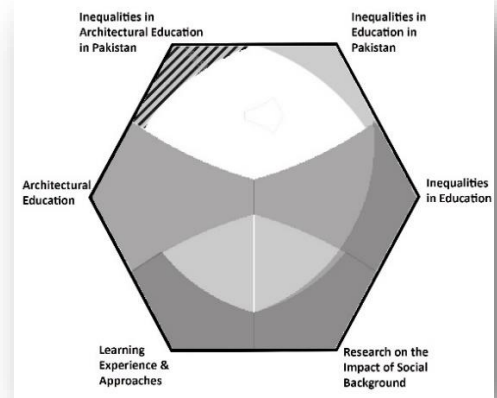


Figure 5-5: Pilot Study

CHAPTER SIX
Research Framework and Methodology

6 Research Framework and Methodology

6.1 Introduction

The focus of this chapter is the research framework and the methods of data collection and analysis. It begins by discussing the research gap identified in the previous chapters and explains the scope of the study. The aims, objectives, and research questions are defined, and the philosophical perspective of the researcher is explained. This chapter also shows how the concepts and ideas discussed previously are relevant to this study, with the development of a theoretical framework based upon these concepts. The data collection strategies employed in previous studies are considered here in terms of their respective advantages and limitations, and the decisions made for the current study are justified. This chapter details the data collection methods and techniques used in this study and provides an overview of the data analysis process (which will be explained in more detail in the following chapters).

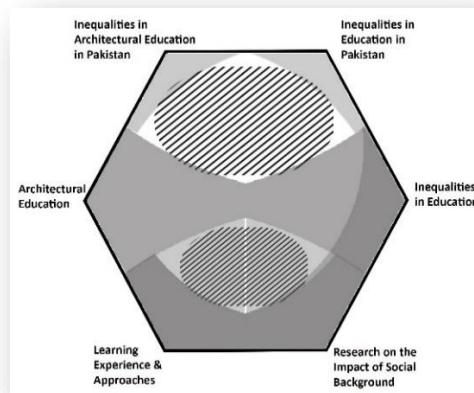


Figure 6-1: Identifying the knowledge gap

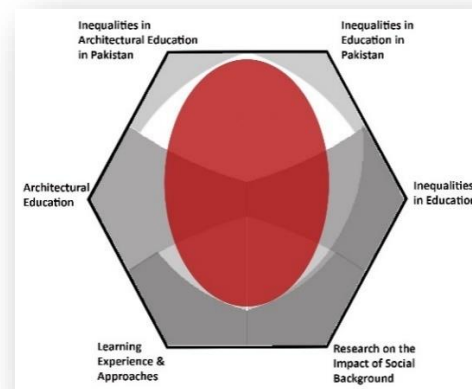


Figure 6-2: Scope of the current study

6.2 The knowledge gaps

The concepts discussed in Chapters 2 to 5 are mapped out in Figure 2-7, 2.8, 3.9, 3.10, 4.5, 4.6, 4.7, 5.3, and 5.4 (given at the end of the relevant chapters). All these knowledge maps are overlapped in Figure 6.1, with the shaded areas identifying the knowledge gaps. Two gaps are identified here. At the top of the Figure is the more prominent gap, and this illuminates

the lack of research into architectural education in Pakistan, both in terms of social inequality and students' learning experiences and approaches. The second gap concerns the global context, as no studies have investigated how the social background of students affects learning experiences and approaches to architecture. Figure 6.3 depicts the scope of this study. The scope was determined on the basis of the available research in critical areas of this topic (discussed further in Figures 6.4 and 6.5), in an attempt to fill the gaps in knowledge of the relationship between architectural education and social inequality and learning approaches in the Pakistani context.

6.3 Research aim

This research aims to illuminate students' architectural learning experiences and approaches to identify how being raised in a particular social setting leads to certain personality dispositions that affect students' understanding of architecture and their behaviour during the learning process.

6.4 Contribution to the knowledge

Studies on the social background of students in architectural education have tended to focus on a single aspect of the topic, such as the experience of studio learning or architectural review in relation to habitus (Webster 2005). Some studies have been based on observation, rather than empirical data (Stevens 2002). The study most relevant to the current work is that of Payne (2015), who investigated the role of cultural capital and organisational habitus in architectural education, concluding that schools need to understand the needs of students from different social backgrounds to ensure they are engaging all students on a standard meeting ground. However, Payne does not talk about the differences in learning approaches.

To understand the learning paths through the schools of architecture, this study explores the implications of social background for students' learning experiences, defining these learning approaches using real-world data. No other study has investigated the impact of social background on student learning approaches in the field of architectural education. In Pakistan, there have been no studies of the impact of social background on any aspect of education. The pilot study conducted for this project highlighted the importance of

understanding architectural students' learning in the context of their social upbringing. For this reason, this study differs from any previous work in this subject area, and it is expected to add new insights into the fields of sociology and architectural education.

6.5 Research objectives

The research objectives are as follows:

- To identify variations in the dispositions of students in terms of different social attributes.
- To comprehend the practice of architectural education in the context of Pakistan and the role of social class.
- To understand the variation in students' experiences of architectural learning in relation to differences in social background.
- To understand how students' personality dispositions, develop as a result of their social upbringing, as well as the impact of this on their learning approaches in the architectural studio

6.6 Research questions

Based on the objectives, three main research questions emerge:

- What are the variations in the students' personality dispositions dictated by their social class?
- How do these variations affect their perceptions of architectural education, and what strategies and approaches do they adopt to be successful?
- How do the characteristics and dispositions of architecture schools contribute to students' learning experiences and approaches?

6.7 Scope and focus

The scope of the study is intended to illuminate how students learn design in an architectural studio and how this is affected by their social class. The research focuses on the time that students spend in architecture school, and design studio learning is the most essential aspect of this. This study investigates whether students from different social backgrounds might perceive architectural education differently and adopt different individual learning

approaches, what methods they may adopt to ensure their success in architectural learning, how their choice to become an architect is affected by social upbringing, and how this affects the time spent in the school. It asks how the pedagogical methods adopted in a studio affect students with different social attributes and what a school might do to cater to the needs of students from different social classes. (This research does not consider how architects from different social backgrounds might behave in their field after graduating from school.)

6.8 Philosophical perspective

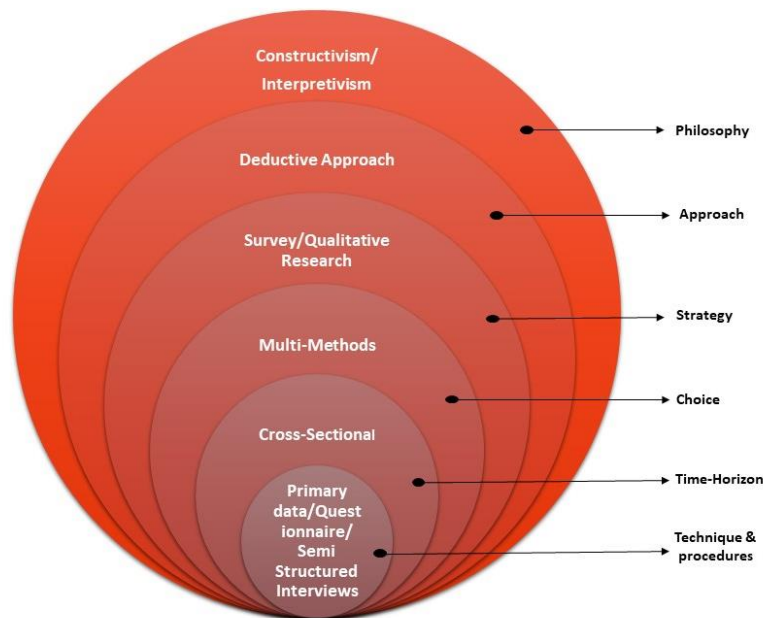


Figure 6-3: Research onion, adapted from Saunders et al. (2015), identifying the philosophical and methodological perspective

To understand the research framework, it is essential to understand the philosophical position of the researcher. Adapted from the work of Saunders et al. (2015), the research onion (Figure 6-3) explains the philosophical and methodological perspective of this work.

Snape and Spencer (2003) identified the foundation of qualitative research as dependent on the researcher's belief about the nature of the social world and what can be known about it (ontology). They argue that it is also dependent on the nature of knowledge and how it can be acquired (epistemology). Thus, it is important to explain the ontological and

epistemological position of the researcher for the current study, identified here by the outermost layer of the research onion.

Ontology deals with the nature of being and the question of whether social reality exists even without the perception of human awareness and interpretation, or whether social actors create it through particular perceptions and resulting actions. The first notion is known as 'objectivism' and the second as 'subjectivism'. (As a theory, subjectivism is identified as 'constructivism' [Diesing 1966]).

The ontological position of the researcher is constructivism, based on the view that meaning and things do not exist independently; rather, they are dependent on human perception. Knowledge is constructed, not discovered and every learner is cognitively engaged in creating knowledge. It implies that every human being's reality is slightly different from each other, and reality is not one single thing, rather a product of many different perceptions and realities. Epistemology deals with the nature of knowledge and the methods of knowing social reality. There are two epistemological positions: the first (positivism) states that reality can be known through observable evidence and scientific findings, and the second (interpretivism) states that one can only access reality through social constructions, such as consciousness, shared meaning, and languages (Williams 2008). The researcher in the current work took the second of these epistemological positions – interpretivism.

Combining being and knowing, and taking ontological and epistemological positions, a constructivist and interpretivist paradigm was formed to better illuminate the world of human experiences (Cohen & Manion 1994, p.36). This relies on the 'participants' views of the situation being studied' (Creswell 2003). The researcher recognises that participants' backgrounds and perspectives may affect the research. The primary focus of constructivist and interpretivist research is understanding of the world of human experiences, resting on the belief that reality is socially constructed (Mertens 2008). This is aligned with Bourdieu's notions of *habitus*, which claims that individuals experience the world around them according to their inherent personality dispositions, which are created by their social upbringing.

This ontological and epistemological position of the researcher has a profound influence on the research conducted with learners. It means that the researcher believes that students' do

not learn in the school of architecture as passive learners, rather they perceive learning in different ways depending upon their perceptions. In other words, they construct their own knowledge, identifying constructivist ontology. Also, as students are the creator of their knowledge, we can learn about this knowledge only by exploring their world through their perception, identifying interpretivist epistemology. This is the reason; the researcher tries to explore students' perception of learning in this study through their interpretation. The constructivist ontological position also means that students' social backgrounds and schools' learning conditions can impact how students construct their knowledge. This is why the researcher explores the influence of their social upbringing through the concepts of cultural capital and habitus, and explores the learning conditions in the schools of architecture in Pakistan through the concept of institutional habitus (chapter 7).

The constructivist and interpretivist paradigms provide the basis of most research into education in the area of phenomenology, phenomenography, and grounded theory. These research models tend to take the inductive approach. However, a 'deductive approach' was used for this study, and a hypothesis was built at the beginning of the research. This approach was chosen because of the investigator's own experience of teaching in the field, as explained in relation to her ontological position. While this helped with the development of a hypothesis, it also created the risk of clouded judgment, making it challenging to ensure the study direction was led solely by the data. This challenge is discussed further in section 6.12 in relation to the limitations of qualitative research and in section 6.13 in relation to the benefits of triangulation by different data collection methods. The pilot study (Chapter 5) plays a role here and gives a strong indication of the impact of social class on the learning experiences of the students. The sociological theories and learning approach theories that provided the basis for the hypothesis and research framework are explained further in the next section.

This study used a mixed-methods approach, and data were collected using a questionnaire survey and semi-structured interviews. The choice of these strategies – and their implications – are discussed further in the current chapter in the section 6.11 and 6.12. The time horizon for this research is cross-sectional, as it was conducted in the fall of 2018 in various

architecture schools in Pakistan. Quantitative data were analysed using Excel and SPSS and the qualitative data using NVivo.

6.9 Hypothesis

As given in the introduction, the hypothesis for this research is as follows:

Students belonging to different socio-economic classes possess different quantities of cultural capital and habitus, which strongly influence their learning experiences, approaches, and chances of success in the schools of architecture in Pakistan.

This hypothesis is grounded in three factors. The first of these is the researcher's understanding of the study context. At the time of beginning the research, she had just under eight years of teaching experience at one of the top-ranked public sector architecture schools in Pakistan. Coming from a working-class family, she had experienced difficulties in learning architecture herself that she believed students from more privileged socio-economic backgrounds did not tend to face. During her teaching experience, she observed that some of her students from socioeconomic backgrounds similar to her own were facing the same difficulties that she had, which gave her the motivation to investigate this matter further.

The second factor is the theories and concepts of French sociologist Pierre Bourdieu (1984). As explained in Chapter 2, his theories of social stratification based on aesthetic taste provide the conceptual toolkit for this hypothesis. According to Bourdieu, a person's inherent personality dispositions develop in childhood through their exposure to cultural activities as a result of their social status, steering them towards their appropriate social positions. Bourdieu also claims that the education system acts as a facilitator of this social stratification by favouring individuals with high levels of cultural capital. This theory of cultural reproduction indicates that students from different social backgrounds tend to have different experiences of higher education.

The third factor is the points of view of the other teachers in the context explored by the pilot study (Chapter 5). Most teachers in architecture schools in Pakistan believe that students from different social backgrounds possess diverse personality dispositions (habitus) and have different levels of familiarity with the dominant social culture (cultural capital), which define their learning experience and the likelihood of success in the school of architecture.

The concept of learning approaches introduced by Marton and Saljo (1976), states that students can have ‘deep’ or ‘surface’ approaches to learning. This concept has been explored in the context of architectural education (Iyer 2018), but it has never been considered with social background. As deep and surface learning approaches reflect students’ thinking and personality dispositions – which Bourdieu argues are defined by their socio-economic status – a connection between these two concepts can be assumed. Thus, this hypothesis is tested here using the quantitative and qualitative methods chosen for this study.

6.10 Research framework

The purpose of investigating different aspects of the literature was to develop a theoretical framework for this study. The title of the study identifies four main areas for investigation: ‘A study of the impact of social background on the learning experiences and approaches of students in architectural design education’.

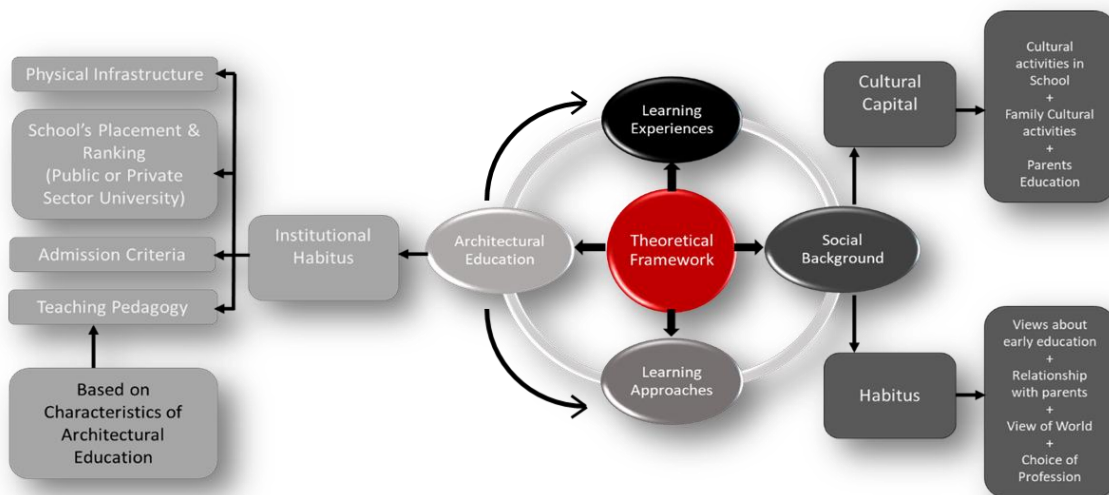


Figure 6-4: Theoretical framework for the investigation of social background and architectural education

These areas are social background, learning experiences, learning approaches, and the role of architectural design education. Figure 6-4 explains how these areas were investigated, linking them to the theories discussed in Chapters 2, 3, and 4. The social background was investigated through the measurement of cultural capital and habitus. Cultural capital is an aspect of social identity that directly influences education, as Bourdieu claims that the education system demands the possession of cultural capital for a student to succeed (Bourdieu 1977). Cultural

capital gives an account of more measurable aspects of students' social backgrounds, while habitus requires deeper digging into their personality dispositions. This defines the way that students see the world around them and act accordingly.

The characteristics of architectural education discussed in Chapter 4 have two roles in this study. This helps to understand the institutional habitus of architecture schools. This also aids understanding of students' learning experiences and approaches in relation to different aspects of architectural education. Institutional habitus is explored to reveal how different institutes shape the learning experiences of students from different social backgrounds. The different schools' practices of various aspects of architectural education – in conjunction with their university profiles – shape the schools' embedded dispositions. Of the four aspects investigated, three concern the university's profile (this includes infrastructure, placement and ranking, and admission criteria), and the fourth is the school's teaching pedagogy and its embedding of theoretical subject areas within the design studio. This aspect was investigated in relation to the different characteristics of architectural education discussed in Chapter 4.

As explained in Figure 6-5, students' learning experiences were investigated in relation to different aspects of architectural education by exploring how the students experienced them. The learning approaches were investigated from two perspectives. The first was based on the findings from the literature and included concepts of motivation, perceptions of learning context, learning conception, and reflection. These aspects are discussed in Chapter 3 (sections 3.5.4, 3.6, and 3.7) and their relevance to the current study is explained in Figure 3.10. The second aspect is associated with collection and integration codes (knowledge codes), including how students develop pedagogic relations and deal with curriculum boundaries. These aspects are discussed in Chapter 3 (section 3.9) and their relevance for learning approaches is depicted in Figure 3-8, while their relevance to the current study is presented in Figure 3-8. Using these two sets of aspects, students' learning approaches were investigated to identify whether they were employing deep, strategic, or surface learning approaches.

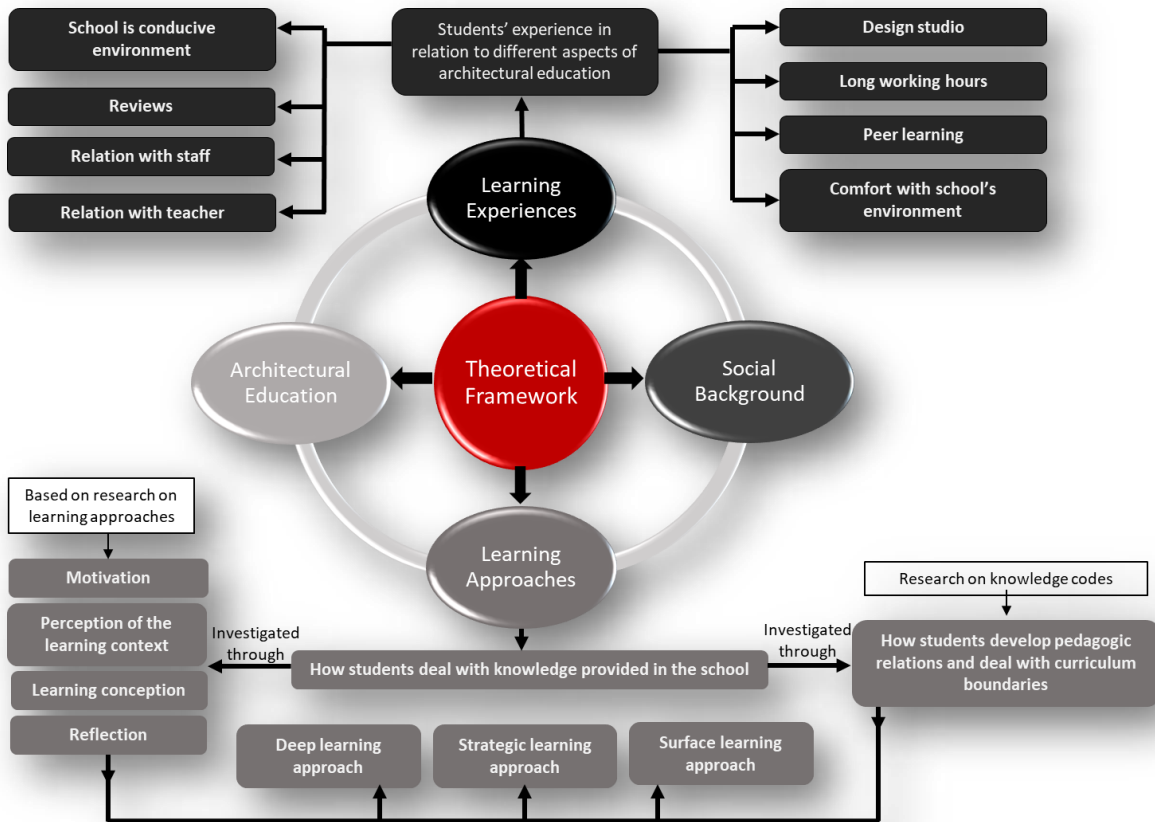


Figure 6-5: Theoretical framework for the investigation of learning experience and approaches

6.11 Research methodology – analysing the methods in the literature

The theoretical framework is based on four areas of study, and the research methods are also discussed in relation to these areas. This section discusses the methods identified as appropriate for the current study based on the findings of the literature review. The impact of social background, as represented by Bourdieu's concepts of cultural capital and habitus, was explored using the methods chosen by previous scholars for such investigations. Similarly, institutional habitus, learning experiences, and learning approaches were investigated using previously applied methods.

6.11.1 Investigating habitus

Of the concepts under discussion, habitus is the most complicated, and according to Bourdieu, the one that most strongly affects educational behaviour. Bourdieu's intangible conceptual tool of habitus demands experimentation and determination to avoid the limitations of

“methodological orthodoxy”. Reay (2004) critiques the use of Bourdieu's concepts in overlaying research analysis and argues that it is essential to incorporate the concepts in the context of data collection and research analysis. Bourdieu's approach is based on the way of thinking and of ‘doing things to find out’ (Fowler, 1996). He used a range of qualitative and quantitative data collection and analysis tools and techniques in his work. In his most celebrated work, ‘Distinction’ (1984), a study of French society, Bourdieu used both types of method, though a major part of the inquiry relies on qualitative work to explore the practices and preferences of different social groups. Most research incorporating the concept of habitus employs qualitative methods, often life-history or biographical-narrative interviews (Atkin 2000, Lehmann 2007, Lehmann 2014, Costa 2015, Lingard et al. 2015). Some studies have combined interviews with other techniques; for example, von Rosenberg (2016) uses discourse analysis of film narration and life-history interviews to investigate the impact of education on habitus transformation. Nash (2002) used focus-group interviews to explain why working-class students find it difficult to accept the habitus of the school.

Few studies have used quantitative methods to explore habitus, and Gaddis (2013) suggests that quantitative studies have rarely incorporated habitus in their models. Linking the role of cultural capital with educational achievements in a detailed quantitative study, Dumais (2002) operationalised habitus in the form of students’ perceptions of their future occupations. She also investigated parents’ habitus in a quantitative study, looking into the role of students’ early childhood cultural capital on teachers’ perceptions of their performance (Dumais, 2006). Thus, the vital question is not what data collection and analysis methods are used, but rather how they are used and to what ends. Evans (2016) identifies that, when exploring habitus, the epistemological assumptions are more important than the methods used, as they underpin the desire to explore. He provides a detailed explanation of how habitus can be explored using different methods, including biographical-narrative interviews and visual methods. An examination of the literature establishes that the interpretivist nature of habitus demands a qualitative approach to an inquiry. Table 6.1 identifies the qualitative methodologies that have been used to investigate individual life histories, revealing why one method was chosen over the alternatives for the current study.

Qualitative methodologies	Reasons for non-suitability	Reasons for suitability
Case studies	Longitudinal time horizon, multiple sources, and interviews required	
Ethnography	Longitudinal time horizon	
Grounded theory	Pre-existing hypothesis, no assumptions required	
Phenomenology	No assumptions required, longitudinal time horizon	
Narrative interview		Narrative interviews are designed to investigate life history and worldview, cross-sectional time horizon

Table 6.1: Exploring the suitability of qualitative methods for the habitus investigation

According to Grenfell and James (1998), the individual case study method is most appropriate for Bourdieuan research. However, the current research has a particular limitation that makes the case study approach challenging to implement. In a case study approach, multiple interviews are to be conducted with the same individuals, and the data need to be triangulated through other sources and over a sustained period (Tellis 1997). This method is not suitable for this research, as the interviewed individuals are located in different cities of Pakistan, while the researcher is based in Cardiff, UK. In addition, the time horizon for this study is cross-sectional, as it forms part of a PhD that must be finished within a specific timeframe. These budget and time restrictions made it impossible to travel between cities on multiple occasions to conduct several interviews. In addition, the recommended number of interviews for the case study approach is very small, at just 5-10 (Creswell 2016), which would not be suitable for comparing the learning approaches of students with a range of cultural capital and habitus.

Ethnography is an approach to investigating cultures that involves the study of a group of people situated in the same time and space (Dirksen et al. 2010). This approach, however, has a longitudinal time horizon and thus did not suit the current study. Furthermore, the focus of this study is not cultural practices (the focus of ethnography), but rather the individual's perception of the world. The grounded theory involves the researcher's attempt to develop an abstract theory based on an investigation of actions or interactions, grounded in the views

of the participants in the study (Creswell 2009). However, the purpose of the current research was not to develop a new theory but to investigate the validity of existing assumptions and developed theories, thus grounded theory would not be appropriate. Phenomenology is an approach in which the researcher identifies the essence of the human experience of a phenomenon (Creswell 2009). This is an inductive method and demands no assumptions or hypotheses at the beginning of the research. It does require active and prolonged engagement with the subjects. These demands could not be met for the current study.

For this study, a life-history approach was taken to inform the qualitative interviews (Rubin & Rubin 2012). This is a suitable strategy for exploring students' habitus, as habitus is the inherent personality dispositions created as a result of life history. This method of inquiry is also in line with constructivist interpretive theory: to extract an interviewee's worldview, constructionists seek to make sense of the events and experiences the interviewee has had in their life (Rubin & Rubin 2012). Constructionists do not ignore the specifics of the worldview to create an average of the responses, as positivists often do. The current study is not focused on the views and experiences of individuals; rather, it seeks to understand the lens through which they view the world. That worldview is the students' habitus. Many other studies have used similar methods to capture habitus. Burke (2011) made an extended case for the suitability of the biographical narrative interview method (BNIM) for capturing habitus. This is supported by Costa, Burke, and Murphy (2019), who argue that although BNIM is traditionally associated with grounded theory, it is equally applicable to theoretically driven projects. This provides a valuable opportunity to investigate a life history and uncover an individual's disposition and ability to 'play the game' based on their understanding of that game.

Most research has used the concept of habitus not on an individual level, but rather moving from the individual to the collective (institutional/organisational/familial/societal habitus) and back to individual habitus. This is important because understanding how an individual's habitus interacts with and is affected by the collective habitus provides rich insights. Charlesworth (2000) and Reay (2010) investigated how an individual's habitus is affected by

the collective habitus. Similarly, in the current study, the effect of collective habitus (institutional habitus, see Chapter 7) is explored in relation to personal habitus.

6.11.2 Investigating cultural capital

Cultural capital is a tangible concept. This is the familiarity with the dominant culture of the society that an individual develops in childhood, through exposure to cultural activities. As discussed in the literature (section 2.9.2), Bourdieu cites three types of cultural capital. However, most studies explore embodied cultural capital through the concept of habitus, and this approach is taken in the current study.

Bourdieu provides neither a theoretical framework nor empirical strategies for investigating cultural capital (Sullivan 2002, Winkle-Wagner 2010). However, by combining objective and institutionalised cultural capital, the empirical literature has been able to use a wide range of cultural activities – both inside and outside the school – as indicators of cultural capital (Sullivan 2002, Bennett et al. 2005, Noble & Davies 2009, Payne 2015, Sortkaer 2019). This adaptation of cultural activities for use as indicators of cultural capital in the current research is discussed in Chapter 8 (section 8.2). In all the research mentioned here, these activities are investigated using questionnaire surveys, and this quantitative method was also employed for the current study. A detailed analysis of these previous studies is provided in Chapter 8 (section 8.2), explaining how they informed the decisions taken in relation to this research.

6.11.3 Investigating institutional habitus

The role of institutions mediated by their practice of architectural education was explored through the concept of institutional habitus. Previous studies have employed various methods and sources to investigate institutional habitus. For example, Ingram (2009) conducted qualitative interviews, and Payne (2015) used both qualitative interviews and quantitative survey methods. Reay et al. (2001) used field notes and observations, along with qualitative and quantitative data to develop a comprehensive understanding. Following in their footsteps, Thomas (2002) employed these methods in addition to a policy review of the institutions under study. Based on these approaches, the current study also uses semi-structured interviews and questionnaire survey data to investigate the institutional habitus of

the schools in the study. It also derives data from field notes, observations, photographs, and the data and information available online about these schools.

6.11.4 Investigating learning experiences

'Learning experience' is how students perceive different aspects of their learning. Moon (2004) suggests that learning happens when there is an active change in a student's perception; thus, it is crucial to explore the learning experience from the student's perspective. This is a very broad concept and exploration can be conducted using several methods, including both qualitative narrative interviews and quantitative surveys. Payne (2015) investigated the learning experiences of students in architectural education using questionnaire surveys. The current study explored the learning experiences of students in the schools of architecture using questionnaire surveys, designed to reflect the different aspects of architectural education. The findings were then triangulated using semi-structured interviews.

6.11.5 Investigating learning approaches

Learning approaches determine how students deal with knowledge. Marton and Saljo (1976) explored this notion using detailed qualitative interviews, and many other researchers have also followed this path (Iyer 2018). The Marton and Saljo investigation gave rise to a new methodological approach, known as 'phenomenography' (Marton 1981). This methodology involves conducting qualitative interviews and analysing them to identify the themes that emerge from the data. To properly undertake this approach, the methodology must be free from any pre-existing theoretical assumptions. However, some theoretical concepts are involved in the current study, forming the basis of the hypothesis. As a result, phenomenography is not suitable for this study. Rather, this study uses qualitative interviews that were originally used by Marton and Saljo to gather data on students' learning approaches. The concept of 'knowledge codes', (Bernstein 2003) that becomes part of students' learning approaches has also been investigated in previous studies using qualitative interviews (Jenkins, 1990).

So, in addition to exploring habitus, this study used semi-structured interviews to illuminate the learning approaches of students in the schools of architecture.

6.12 Advantages and limitations of the research approaches

Based upon the discussion in the previous sections, this study took a mixed-method approach, comprising both qualitative and quantitative inquiry, and complemented by field observations and online information gathering. Different data collection methods for this study are mentioned in Figure 6-6.

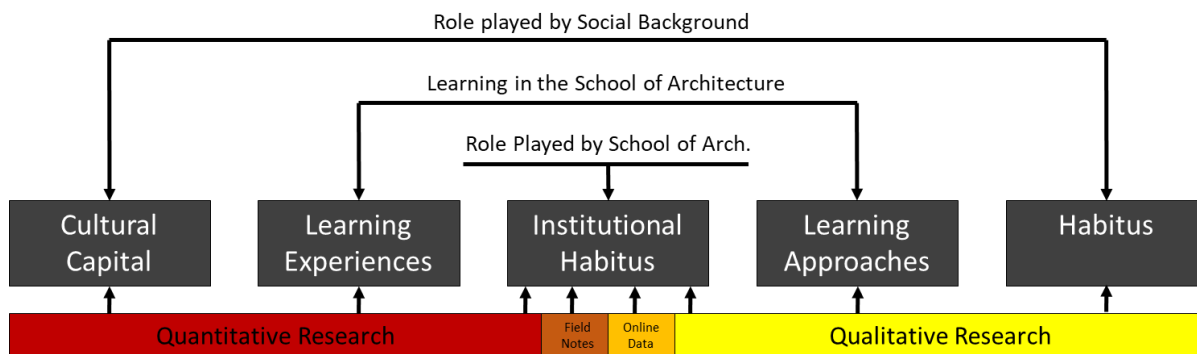


Figure 6-6: Research approach for different areas of study

These methods each have certain advantages and limitations, as identified in Table 6.2, and discussed here in turn. The biographical narrative interview method (BNIM) of data collection has many advantages. For example, it allows issues to be discussed in depth (Rubin & Rubin 2012), as the interviews are not restricted and can be redirected in real-time to the most fruitful topics. The research framework can be quickly revised based upon newly emerging information, the data are more compelling than that of quantitative research, and the complexities of the findings that could be lost in quantitative research are exposed (Anderson 2010). However, Costa, Burke, and Murphy (2019) discuss the limitations of this interview technique for investigating habitus. They note that, like most qualitative research techniques, BNIM often lacks reliability and validity, which are considered the strengths of quantitative research. The method is also often charged with biographical reconstruction as a result of its high level of reflexivity (Kuper, Lingard & Levinson, 2008). Thus, it is critical for the researcher to remain constantly alert to avoid projecting their own experiences or using them as a lens through which to view and translate the interviewees' experiences (Berger 2015). The biggest shortcoming of life-history interview research is that the findings cannot be extrapolated to a larger population, as the findings are not tested for their statistical significance (Atieno 2009).

However, this is not a drawback if the study aims solely to produce context-specific results. All these issues are discussed further in Chapter 9, where the qualitative data is analysed to investigate the role of habitus.

Research method	Advantages	Limitations
Biographical narrative-interview method (qualitative study)	Not restricted, can be redirected in real-time, provides in-depth information	Difficult to generalise, prone to bias, lacks reliability
Questionnaire survey (quantitative study)	Reliable, applicable to a larger population, free from bias	The danger of oversimplifying the data, individual experiences can be lost in translation
Online data	Produces information with minimal effort	May lack credibility
Field notes	Direct source of information, especially for the context	Danger of bias

Table 6.2: Advantages and limitations of different methods used in this study

The questionnaire survey method is very different from the semi-structured interview method and provides different benefits. Many scholars consider quantitative research to be more reliable than qualitative research, as it does not rely on interpretations and is thus free from bias (Dörnyei 2007, Vogt 2007, Vogt et al. 2012). It is useful for finding patterns of behaviour and overarching themes. Quantitative data are primarily numerical and can be analysed using graphs and charts. Quantitative research can be validated using analysis. It is reliable and can be generalised to larger populations (Muijs 2012). However, it also has certain limitations, particularly in social science research, where the experiences of individuals have value. Here, using this method poses the risk of oversimplifying the data (Queirós, Faria & Almeida 2017). This study also used information gathered from various websites to investigate the institutional habitus of the schools under study. The advantage of this is that precise information can be found with minimal effort. The most significant disadvantage of using online information, however, is that its credibility may be questionable (Metzger 2007), thus it must be evaluated carefully. Unstructured field notes were also used. This method is recommended in the literature for making sense of the context of the research, as such notes are a direct source of information (Phillippi & Lauderdale 2018). This method is typically associated with ethnographic research; and in research based on participants' perception, it

may lead to bias (Mulhall 2003). However, they were used in this study solely to explain the physical infrastructure of the contexts, which is a tangible concept and not dependent on interpretation.

6.13 Triangulation

As identified in the literature, all research methods have certain limitations (Atieno 2009, Queirós et al. 2017). Thus, using multiple approaches provides diversity and provides the opportunity to examine the situation from different perspectives (Tashakkori & Teddlie 2003). This is 'triangulation' in research. The importance of triangulation has been discussed extensively in the literature (Carter et al. 2014, Smith 2003). Although it has many purposes, its primary goal is to reduce or eliminate research bias (Jonsen & Jehn, 2009). Triangulation is conducted at different levels of research. Denzin and Lincoln (2000) identified four types: (1) data triangulation, or data gathered from different sources that is often done in qualitative research; (2) theory triangulation, which uses different theoretical perspectives to make sense of the same set of data; (3) investigator triangulation, which involves several researchers; and (4) methodological triangulation, or the use of mixed research methods. Williamson (2005) suggests that mixed methods research allows the limitations of each method to be transcended, as the scholar is able to take different perspectives on the same phenomenon. This research also used triangulation at different levels. For theoretical triangulation, multiple theories were used to investigate each aspect of the study. To understand the impact of social background, Bourdieu's two theories of cultural capital and habitus were applied, investigated using quantitative and qualitative methods to provide methodological and data triangulation. Similarly, learning approaches were investigated using two theories: deep and surface learning approaches (Marton & Saljo 1976) and knowledge codes (Bernstein 2003, Maton 2013). Data source triangulation (Hussein 2009) was employed to investigate institutional habitus, as explained in Chapter 7. The pilot study (Chapter 5) also supported triangulation at the final analysis stage, by enabling a comparison of the teachers' and students' perspectives on the impact of social background on learning experiences.

6.14 Reflexivity and biases

As explained in section 2.15, according to Bourdieu, the agents' ability to attain knowledge of the various fields depends upon their relation to the field, called "reflexivity". For this reason, the social researcher must develop a critical awareness of his or her social position in relation to both the research objective and process because they occupy a place in that social world. This is important to avoid any scholastic biases, that is the tendency of social scientists to impose second-order theoretical explanations of the agent's behaviour.

As the researcher has 8 years of professional experience teaching in the oldest architecture school in Pakistan, she has some perception of the social structure in these schools. This is the basis of defining the research objective for the study, as being part of the school, the researcher observed that some students struggle with learning architecture more than others and she wanted to explore the reason. But at the same time, this relation of the researcher with the schools of architecture makes her susceptible to scholastic bias, as she has some pre-conceived notions about the learning experiences of students from the different social background. These notions can impact the data collection and assessment in the qualitative interviews as she could provide her own explanation to students' interpretation. This is similar to the idea of "confirmation bias" that is to search for and interpret the information to confirm and support the pre-conceived beliefs (Klayman, 1995). The researcher made sure to steer clear of these biases in the data collection, processing, and analysis stage. A further explanation of this is provided in section 9.2. Also, as explained in the previous section, this study is using quantitative methods to provide triangulation and overcome the possibility of this bias. Creswell (2009) advocates for the use of mixed methods, arguing that this ensures biases inherent in any single method are neutralised or cancelled out by the biases of the other methods

Another form of bias "courtesy", is also identified in the literature to be impacting the social research done through qualitative methods. It is a response bias, that occurs when some respondents do not fully explain their discontent with a service or product as an attempt to be courteous toward the questioner or the organization (Jones, 1993). There is a possibility of courtesy bias in this study, as students might not want to talk bad about their schools in front

of the questioner. Few measures were taken to overcome this bias, first, the interviewees were selected on a voluntary basis and were not nominated by their teachers or anyone from the institute to make sure students feel free to speak their minds. Second, interviewed students were explained in the beginning that their names will remain completely anonymous. The issue of biases is further explained in section 9.2.

6.15 Data collection strategy

Section 6.11 details the data collection methods used in the literature and applied here for the various aspects of the framework. The current section discusses the data collection strategies for different areas of the study and explains how they were adapted for the context. A quantitative questionnaire survey was used to explore the concepts of cultural capital and learning experiences, with qualitative interviews used to investigate students' habitus and learning approaches. Multiple methods were used for the investigation of institutional habitus as explained later in this section.

The questionnaire survey was designed based on the findings of the literature review, for cultural capital students' cultural engagement within the school and with family was investigated. To gather data on learning experiences, the questionnaire reflected the characteristics of architectural education, as discussed in Chapter 4. The survey questions are given in Chapters 7 and 8.

The next stage of the data collection involved qualitative interviews. To investigate the students' habitus, their life histories were explored. Brief snapshot interviews should be avoided for this purpose (for the reasons discussed earlier), thus biographical narrative interviews were conducted (Reay 2004). For the understanding of habitus, two primary factors were explored in these interviews. The first factor was the interviewees' life histories, which included their early education, their relationships with their parents, how they spent their free time, and so on. The second factor was their perceptions of the world, including what they believed to be essential in life, why they wanted to be architects, what they wanted to do after graduation, and so on. To gather information about the students' learning approaches, questions were asked about their perceptions of the knowledge they have gained before they came to the school of architecture. They were asked whether this knowledge had

helped them to understand architecture and whether they attempted to incorporate the knowledge into other subject areas in the design studios. They were asked about their relationships with their teachers and fellow students. In addition, they were asked to explain how they begin a new project and where they look for inspiration.

To investigate institutional habitus, data were collected using quantitative surveys on the students' perceptions of the taught and hidden curricula in their schools. The qualitative interviews explored the students' perceptions about their institution. Data were also collected from the websites of the schools to aid understanding of the universities' profiles, admission policies, and defined pedagogies. Data on physical infrastructure were collected in the form of field notes and photographs, taken while visiting the schools.

6.16 Data collection process

For the quantitative research, data collection was conducted in 14 architecture schools in Pakistan. Before the main data collection, a preliminary study was conducted in March 2018. This is not the pilot study conducted with teachers and explained in chapter 5, this is a small study to check the response of students for the main questionnaire survey. The questionnaire was disseminated to 10 architecture students. The questionnaire was then updated based on their responses (see Appendix A). A detailed explanation of the questions is provided in Chapter 7 (section 7.8.1) and Chapter 8 (sections 8.2 and 8.3)

The study was conducted in the summer of 2018, at that time there were 20 accredited architecture schools in Pakistan, right now there are 21 accredited schools. The process of accreditation is explained in chapter five (section 5.6).

Figure 6-7 shows all the accredited architecture schools in Pakistan through red and green dots. The questionnaire was circulated to all these schools. In the first stage of data collection, only two schools responded to the online form, giving a total of 234 responses. In the second stage, the schools were contacted to arrange a visit so that hard copies of the questionnaire form could be circulated to students to achieve a higher response rate. This received responses from 12 more schools, making the total 14. Red dots in figure 6.7 shows these 14 schools, and green dots show the remaining schools where the survey was not conducted.



Figure 6-7 Accredited architecture schools in Pakistan shown through red and green dots

Hard copies of the questionnaire form were circulated to all available students in the school at the time of the visit, including students in years 1-5. A total of 1,111 responses were collected using this method, bringing the total to 1,345 responses. However, when adding the responses from the hard copies to the online forms, 15 questionnaires were discarded as the students had only completed their names and other necessary information and had not responded to the other questions. So, there are 1330 useable responses. Table 6.3 shows the number of responses from all the universities in which the study was conducted. The average number of students in each class in the schools of architecture in Pakistan is 40 to 50, which means there are 200 to 250 students in each school, over the five years of the program. The minimum number of responses is from NED, which is 60 and the maximum number of responses is from UET, which is 154 as shown in table 6.3. Although this was not an aim, responses are fairly balanced in terms of gender (Table 6.4). A detailed profile of schools included in the study is provided the chapter 7 (section 7.2).

No.	The university	Frequency	Percentage	Valid percent	Cumulative percent
1	BNU	127	9.5	9.5	9.5
2	BUIITEMS	71	5.3	5.3	14.9
3	Comsats Islamabad	85	6.4	6.4	21.3
4	Comsats Lahore	117	8.8	8.8	30.1
5	Dawood	128	9.6	9.6	39.7
6	IVS	98	7.4	7.4	47.1
7	KU	70	5.3	5.3	52.3
8	NCA	88	6.6	6.6	58.9
9	NED	60	4.5	4.5	63.5
10	PU	100	7.5	7.5	71
11	Superior	81	6.1	6.1	77.1
12	UET	154	11.6	11.6	88.6
13	UMT	88	6.6	6.6	95.3
14	USA	63	4.7	4.7	100
	Total	1330	100	100	

Table 6.3: Number of student responses from the universities involved in the study

The semi-structured interviews were conducted with a sample of students chosen at random during the visits to the schools. The researcher made this random selection after being formally introduced to the students. As the students' life histories, social upbringing, and learning processes were to be investigated in the interviews, the importance of empathy was built into the data collection process (Ashworth & Lucas 2000). The researcher began by introducing herself and explaining the research. A consent form was then given to the participants to be signed. As the interview was to be recorded, participants were given information about the recording methods, and their comfort was assured. In this first stage of data collection, a total of 40 interviews were conducted in 10 architecture schools.

Gender	Frequency	Percent	Valid percent	Cumulative percent
Female	667	50.2	50.2	50.2
Male	663	49.8	49.8	100
Total	1330	100	100	

Table 6.4: Frequency of responses, by gender

No.	University	Number of interviews
1	BNU	3
2	BUIITEMS	0
3	Comsats Islamabad	3
4	Comsats Lahore	2
5	Dawood	2
6	IVS	4
7	KU	4
8	NCA	4
9	NED	2
10	PU	3
11	Superior	3
12	UET	7
13	UMT	4
14	USA	3
	Total	44

Table 6.5: Number of interviews from the universities involved in the study

Gender	Number of interviews
Males	27
Females	17

Table 6.6: Gender division for the interviews

After the quantitative data had been processed, university groups were created based upon the institutional habitus. The number of interviews for one of the university groups was very small. To ensure the data were appropriately balanced, the second round of interviews was conducted over Skype in January 2019, and the consent forms were sent to the participants using this method, to be signed electronically and sent back. Four interviews were conducted over Skype, bringing the total to 44 interviews. Table 6.5 and 6.7 show the number of interviews in each school and the genders of the interviewees.

6.17 Data analysis

The analysis was conducted on the basis of the four questions identified in Figure 6-8, which connect the different parts of the study. The analysis was essentially in three stages. In the first stage, the quantitative data were analysed using Excel and SPSS to gather information on cultural capital and the learning experiences of students. Cultural capital was explored using EFA analysis in SPSS to create two factors, then a scatterplot was created in Excel using these

factors. The relationship between the cultural capital groups and learning experiences was explored using cross-tabulations and the results of chi-square tests.

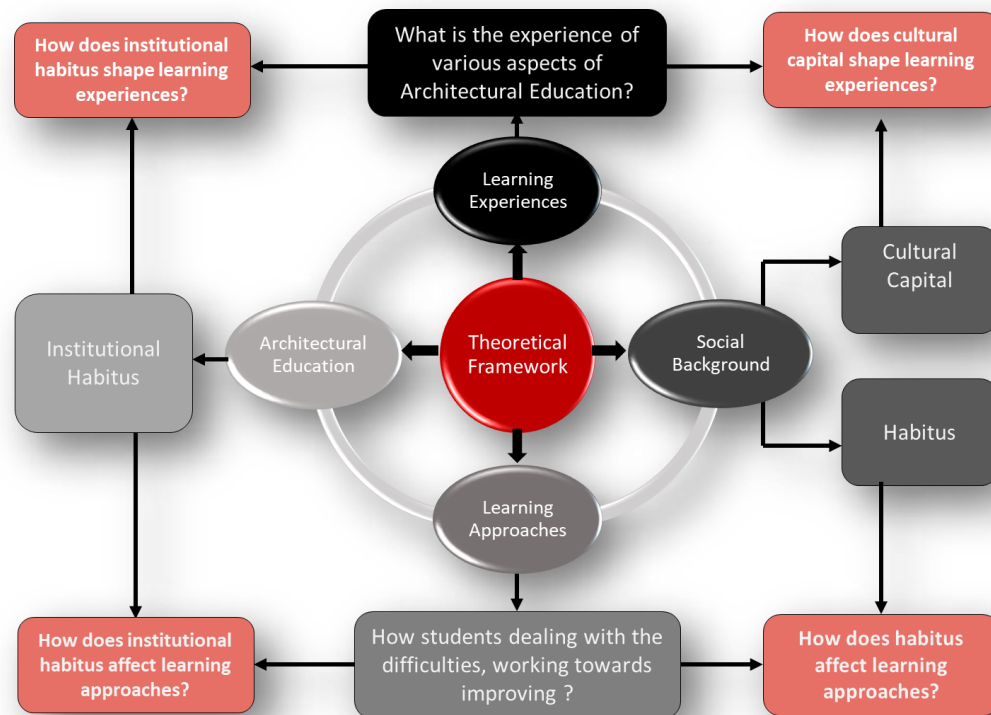


Figure 6-8: Questions for data analysis

In the second stage, the qualitative data were analysed by transcribing the audio recordings and coding the transcripts using NVivo 12. This analysis illuminated the findings on the students' habitus and learning approaches. The role of institutional habitus was explored in both stages. In the third stage, the results and themes that had evolved through the first two stages were considered in relation to each other and in context with the literature.

6.18 Conclusion

This chapter explains the research framework employed in the current study. It highlights the research gap, explains the theoretical framework on the basis of the literature, and identifies both the data collection methods described in the literature and the methods used for this research. It also gives an overview of the data analysis approaches employed here. These approaches are discussed individually and in detail for each aspect of the study in the following chapters.

CHAPTER SEVEN
Investigating Institutional Habitus

7 Investigating Institutional Habitus

7.1 Introduction

This chapter is focused on understanding the characteristics of the schools of architecture involved in this study. The concept of institutional habitus provides the theoretical framework for this. Institutional habitus is the set of principles and perceptions on which a school operates. It is investigated in literature through different aspects of the schools' profile, this study examined the characteristics of the architecture schools through four factors based upon these aspects (Figure 7-1). These are schools' placement in private or public sector universities, their admission policies, physical infrastructure, and teaching pedagogies. These factors are investigated based on data through four different sources, that is internet data, field notes, questionnaire survey, and qualitative interviews. The reasons for investigating these factors and the choice of data sources are also explained in this chapter. As a result of the investigation, the architectural schools are categorised into four groups that are explained later in the chapter.

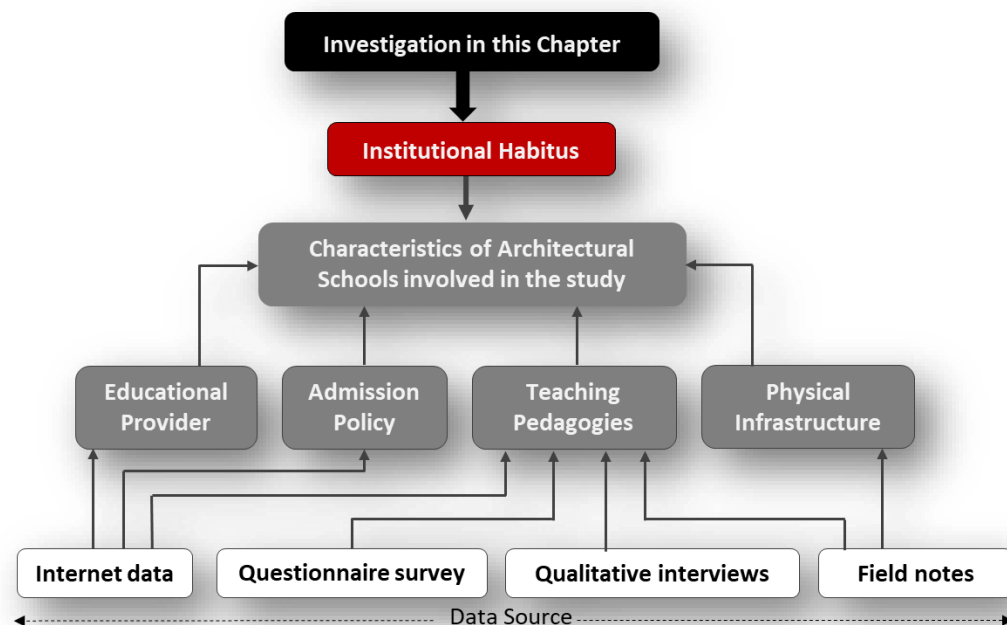


Figure 7-1: Investigation in this chapter

7.2 Overview of the schools included in the study

As mentioned in section 6.15 this study was conducted in 14 architecture schools in Pakistan. To ground this study, it is important to provide a detailed profile of these schools before investigating their institutional habitus

Out of 21 accredited architecture schools in Pakistan, 9 are located in Lahore, which is the capital city of Punjab. Punjab is the largest province in Pakistan in terms of population. Students from the whole Punjab come to Lahore for education and that is why it has the largest number of public and private sector universities in Pakistan (as explained in the pilot study). Hence it has the largest number of architecture schools in Pakistan as well. This is the reason that out of 14 architecture schools where this study is conducted, 8 are located in Lahore. Out of the remaining 6 schools, 4 are located in Karachi, which is the biggest city of Pakistan in terms of population and also the capital of Sindh province. There are 2 other architecture schools in Sindh in the city of Jamshoro. These schools were contacted at the time of the study, but they were closed for summer. There is only 1 school in the Baluchistan province that is in its capital Quetta. This school was included in the study. The only 1 school in the province Khyber Pakhtunkhwa that is located in its capital city Peshawar, was contacted for the study, but no positive response was received, so, it is not included in the study. The 3 remaining schools of Pakistan are located in the capital city of Islamabad, all 3 of these schools were contacted for the study but only 1 allowed the questionnaire survey so it is included in the study. A detailed profile of these 14 schools is provided now.

1. UET, Lahore

Established in 1921 as Mughalpura Technical College, UET Lahore is the oldest engineering institute in Pakistan. It was officially renamed the University of Engineering and Technology in 1972. UET is ranked among the top 5 in the Engineering Category by Higher Education Commission (HEC), Pakistan. In 1962 Department of Architecture was established in this university, it is the oldest bachelor's degree awarding architecture school in the country. It also has the distinction of offering the first M. Arch and first PhD of architecture in the country.

Although the school of architecture is under the faculty of Architecture and planning, by being located in an Engineering University, the Architecture school at UET has a reputation of being influenced by the Engineering environment. It is believed that the school is focused on the practical side of architecture and creates professionals with deep understandings of building sciences.

2. NCA, Lahore

National College of Arts was founded in 1875 as Mayo School of Industrial Arts and was one of the two art colleges created by the British Government in the Indian subcontinent as a part of the Arts and Crafts Movement. It was named in honour of the recently assassinated British Viceroy Lord Mayo, after independence the school was renamed the National College of Arts (NCA). It received a degree-awarding status in 1985, before this the school used to provide a diploma in Architecture, later it started awarding a 5 years bachelor's degree in Architecture. NCA is ranked as the top university in Arts category by HEC Pakistan.

Being an art institution, NCA has a number of arts programmes including fine arts, visual communication design, and film and Television. This art environment is seemed to shape how people perceive the architecture program at NCA. This school is believed to produce architects with a more polished artistic side.

3. UMT, Lahore

University of Management and Technology was established by the Institute of Leadership and Management (ILM) Trust in 2002 and is a private sector university. It has a wide range of Bachelors programs ranging from, Liberal art, Fashion design, Literature, to Accounts and Management as well as Pure Sciences and Engineering. UMT is currently ranked at 35th position in the general category among 73 universities of Pakistan.

The School of Architecture and Planning (SAP) at UMT was founded in 2012. Being a new school, it is trying to establish its position in the field of Architecture.

4. USA, Lahore

The University of South Asia was established in 2005 and the institute was evolved from the National College of Computer Science that was developed in 1987. It has seven main faculties ranging from applied sciences to Engineering and Architecture. It is one of the lowest-ranked universities by HEC and currently holds 69th position in the general category among 73 universities of Pakistan.

It houses one of the oldest architecture schools in the private sector universities in Pakistan. But it is still trying to establish its place in the field, as it does not have a very positive public perception and students with quite low marks in secondary education mostly get admission at this school.

5. Superior University, Lahore

Founded in the year 2000 as the superior college and later established the status of a university. The university is not ranked by HEC in the engineering, arts, or general category. It is only ranked under the business category which is not relevant for architecture. The Faculty of Arts and Design offers four bachelor's programs including Architecture, Fine Arts, Interior Design, and Textile Design. It is only recently accredited by PCATP to award a bachelor's degree in Architecture.

6. PU, Lahore

University of the Punjab or Punjab University (PU) was established in 1882, it is the first to be founded in the sub-continent in the Muslim majority area. It is also the largest university in Pakistan, with 19 Faculties, 10 Constituent Colleges, and 137 departments, centers, and institutes. It is the second top-rated university by HEC in the general category.

The department of fine arts was developed in 1940, in 2004 it evolved into the university college of Arts and Design. The college holds a large number of arts programs including Painting, Sculpture, Music, and Fine Arts, etc. It is one of the most well-reputed schools of architecture with a strong influence of art culture.

7. COMSATS University Islamabad, Lahore Campus

COMSATS University Islamabad, Lahore Campus was established in January 2002. It has five faculties including Architecture and Design, Information Science &

Technology, Business Administration, Engineering, and Science. It is the highest-ranked private sector university by HEC in the general category. It is also a well-reputed university in the field of Architecture.

8. BNU, Lahore

Founded in 2003, Beaconhouse National University is a private liberal arts university. It is the first University of its kind in Pakistan offering undergraduate and graduate programs in various fields of Liberal Arts. Razia Hassan School of Architecture was founded at BNU over a decade ago. The school is well-reputed for introducing new learning methods in the field of architectural education. Though BNU is not highly ranked by HEC, (it is ranked 48th in the general category). But the school of Architecture holds a reputable position.

9. DUET, Karachi

Dawood University of Engineering and Technology was founded in 1962 by the President of Pakistan at that time (Late) Field Marshal Muhammad Ayub Khan. It is ranked 19th by HEC in the category of Engineering universities. Architecture is the only non-engineering course offered by this university.

The discipline of Architecture and Planning was initiated at this university in 1956, in 1972 it was upgraded to a degree-awarding program.

10. IVS, Karachi

Indus Valley School of art and architecture was founded in 1990 by a group of professional architects, designers, and artists. The school was established believing that it will fulfill the need for a quality Fine Art, Design, and Architecture school in Karachi. It is ranked as the second-best art school in Pakistan by HEC.

The discipline of Architecture at IVS is closely integrated with the disciplines of Arts and holds a reputation for producing “starchitects”.

11. KU, Karachi

University of Karachi or Karachi University (KU) was established through the parliament as a Federal University in 1951. Its status was redefined as the University of Sindh in 1962. It is the biggest university in the country holding a wide range of

faculties including Arts, Science, Pharmacy, Management and Administrative Science and Islamic Learning. It is included in the overall Top 10 Higher Education Institutions in Pakistan by HEC.

School of Architecture in PU is part of the faculty of arts and social sciences and is taught under the Department of Visual Studies. Other disciplines under visual studies include Design and Media studies, Textile Design, Industrial Design, Ceramics and Glass, Fine Arts, Islamic Arts, and Arts History. So, architecture at this university is strongly influenced by the culture of Arts and Design.

12. NED, Karachi

The NED University of Engineering & Technology was established in March 1977 by being raised from the status of NED Government Engineering College, which was set up in 1921. It is ranked 11th by HEC in the category of Engineering universities.

The discipline of architecture at this school is the part of Faculty of Architecture and Management Sciences. There is no other arts or design discipline offered at this university.

13. BUIITEMS, Quetta

Balochistan University of Information Technology, Engineering, and Management Sciences (BUIITEMS) was founded in 2002. It is ranked 12th by HEC in the category of Engineering universities. Architecture at this university is part of the faculty of Engineering and Architecture, hence contains a strong influence of engineering culture.

14. Comsats, Islamabad

The COMSATS University was established in 1998. As mentioned before. it is the highest-ranked private sector university by HEC in the general category. Department of Architecture at this school is the part of faculty of Architecture and Design. It is not a predominantly engineering or art university, hence leaving the discipline of architecture carving its own identity. It is one of the three architecture schools in the capital city of Islamabad and holds a reputable position.

7.3 Importance of Institutional Habitus

Investigating and understanding a school's institutional habitus enables a more comprehensive insight into the school's role in defining students' learning experiences and approaches. McDonough (1996) defined institutional habitus as "the impact of a cultural group or social class on individual behaviour as it mediated through an organisation". To develop a complete understanding of the impact of students' social background, it is essential to investigate how their background plays a role in specific institutional habitus. It is also important because it creates a perception about these institutions which affects the students' intake from different social backgrounds possessing a varying level of cultural capital and habitus. Reay et al. (2001) identified that institutional habitus is one of the most significant variables that interact with the social class of the students and determines the choices students make in education.

Moreover, educational institutions define what practices, values, and languages are regarded as legitimate, and on its basis award qualifications. Consequently, more than an instrument of teaching, a school's pedagogy defined by its institutional habitus, acts as a tool for reinforcing status (Thomas, 2002). Therefore, it is imperative to learn about the institutional habitus of the schools involved in the current study to understand how pedagogy and practices are legitimising specific social backgrounds. Pedagogy that is the valid transmission of knowledge, as defined by Bernstein (2009a), explains how the curriculum is being taught in the school. Therefore to understand the pedagogy, school's taught curriculum is explored. Moreover, the hidden curriculum that is the unstated attitude, values, and norms that silently stem from the content of the curriculum and social relations (Dutton 1991), also helps to understand the pedagogy of the schools.

7.4 Strategy for Investigating Institutional Habitus

Institutional habitus is much more than the culture of institutions; it refers to the priorities and issues that are deeply embedded in practices and define the actions sub-consciously (Thomas, 2002). As mentioned in chapter 2 (section 2.12), there are three factors determining the institutional habitus. First is the social composition of schools that define their practices and regulations. Second is the collective perspective of the school that incorporates but goes

beyond the practices of individual teachers. Third is the expressive elements investigated through the daily life of schools that go beyond the defined organisational practices (Burke, Emmerich, & Ingram, 2013). Investigation of the institutional habitus of the schools involved in this study is also based on these three factors as explained in Figure 7-2.

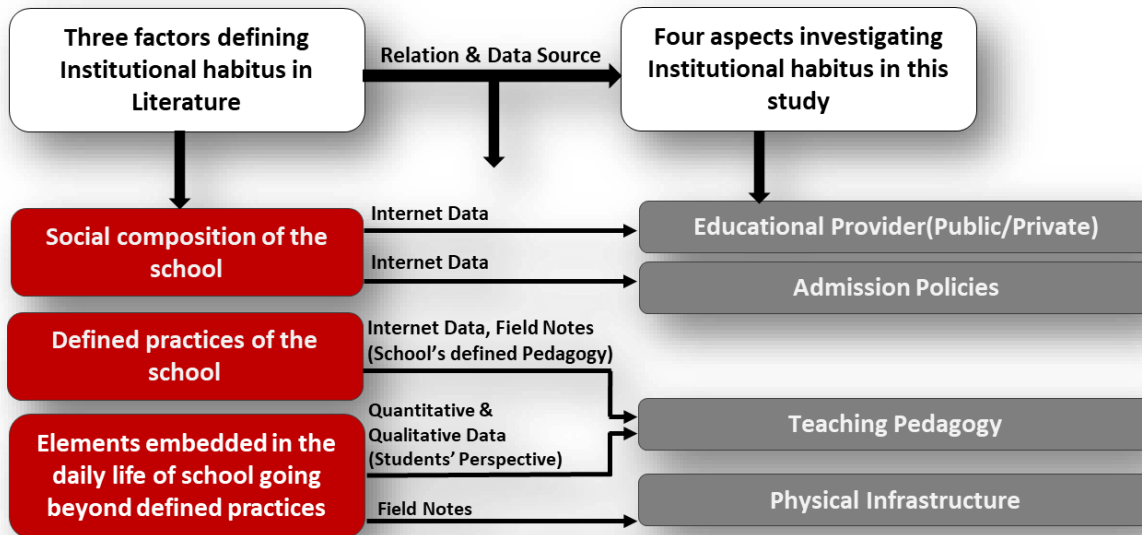


Figure 7-2: Investigation of institutional habitus based on literature

The social composition is the intrinsic element that helps to understand the regulations of an organisation. It is defined through two main factors in literature, first is the fact whether the educational provider is a public or private sector university and the second is the students' characteristics. In this study social composition of the schools is also investigated through these two factors. Getting information on the educational provider is a straightforward task, students' characteristics are explored through the school's admission policies, as they influence the socio-economic background of the students getting admission to the school. School's defined practices are based upon the collective dimension of individual teaching practices mediated through schools' teaching policies; this constitutes a significant part of institutional habitus. These are the teaching practices claimed by the school. However, the "Elements embedded in the daily life of the school" goes beyond the claimed practices. As (Reay et al., 2001) identified that beyond what schools do, it is essential to understand how and why they do it. They also mentioned that to understand the institutional habitus in-depth,

it is crucial to investigate the effects of institutional elements. These elements are cultural bias, prejudice, the type of guidance provided, and other aspects of the hidden curriculum in the school. In this study, embedded elements are explored through students' perspectives in these schools. Embedded factors are also investigated through the physical infrastructure of the school, this investigation bears no precedent in the literature. However, it is essential to be explored because the physical space in which students work has a lot of impact on how much time students spend in the classroom and ultimately impacts learning (Brooks, 2011; Hunley & Schaller, 2009; Montgomery, 2008; Gislason, 2010). This is particularly important in architectural education as students are expected to spend a lot of time in the design studios, and a good versus lousy studio environment can impact this requirement.

7.5 Institutional Habitus Investigation

As discussed in the previous section, institutional habitus is investigated in this study through five factors, that are Educational Provider, Admission Criteria, Teaching Pedagogy, and Physical Infrastructure.

The teaching pedagogy is further divided into two parts as mentioned above. Schools' defined pedagogies are part of the main investigation of institutional habitus. But embedded pedagogy investigated through students' perspective is very complex. Therefore, instead of making this a part of the main investigation, this is explored as a separate section to discover how it engages with the different groups of institutional habitus.

Aspects of Institutional Habitus	Data Source
The educational provider (Public/Private) university ranking	Universities, schools, and HEC websites
Admission criteria	Universities Website, (Information for new applicants)
School's defined teaching pedagogy	Schools' Website (Course Contents, Timetables, School's Vision, Objectives, Pedagogy), Field Notes
Students' Perception of teaching pedagogy	Questionnaire survey, semi-structured interviews.
Physical infrastructure	Observations at Schools' Visits (Field Notes)

Table 7.1: Explanation of Data source for different aspects of Institutional Habitus

Data for each of these factors is collected from different sources as shown in Table 7.1. The first and the most important source is the school's website, and another source is HEC (Higher Education Commission) website. Data is also collected through observations while visiting these schools and through brief discussions with university teachers and management in the form of field notes. For investigating teaching pedagogy from students' perspectives, data is collected through a questionnaire survey and semi-structured interviews.

7.5.1 Educational Provider

There are 14 schools involved in this study. The first factor that defines their social composition is the fact that their education provider is a public or private sector university. It is crucial because this factor determines the amount of fees students pay, impacting the social class of the students entering the school. Out of 14, seven schools belong to private sector universities, and the other seven belong to public sector universities.

The other defining factor among private sector universities is the ranking by Higher Education Commission (HEC) Pakistan. All the private universities that are in the top 30 universities in Pakistan under the general category, or in the top two under the arts and design category are placed in one group. And all the other universities are placed in the second group. Public sector universities do not have clear segregation in terms of HEC ranking as all of them are in the top 50 under the general category. However, the grouping factor for these universities is found to be the teaching pedagogy which will be discussed in section 7.5.4.

7.5.2 Admission Policies

Admission policies are a very significant aspect to understand the institutional habitus. This affects how each school selects students, which determines the social background and characteristics of the students. Schools' admission criteria are examined through the information provided for new applicants seeking admission in these schools. Factors defining the admission criteria include secondary education score, written test, drawing test, and interviews. This categorised universities in a range between the ones that give a lot of importance to secondary education scores (mostly public sector universities) and the ones that give more importance to special admission tests and interviews (private sector universities).

Almost all schools at private universities have a percentage requirement of secondary education score (50 to 60%); this score is only required to be eligible for tests (written and drawing) and interviews. Admission is given based on these test and interview scores. However, schools at public sector universities have two kinds of admission systems. Some of these schools do not conduct any interview or drawing test and admission is based on the aggregated score of secondary education and written test, other schools conduct a drawing test and interviews along with the written test.

7.5.3 Physical Infrastructure

The physical infrastructure of the school is vital because of the nature of architectural education where students must spend long hours in the studios (Dutton, 1991). Therefore, it is very important for schools to create a comfortable working environment for their students. In this study, the physical infrastructure is studied through field notes and observations, and it is found that the defining factor for physical infrastructure is the placement of schools in private or public sector universities. All public sector universities were established more than three decades ago, and their physical infrastructure lacks many facilities that private sector universities provide. This also happens because of the lack of funding available to maintain the physical infrastructure which is not a problem in private sector universities. Private universities have provided fully air-conditioned studios for their students, which makes a massive difference for physical comfort, and determines if the students will spend time in the studio or not. Public sector universities lack this facility. The level of organization and cleanliness is also different among public and private sector universities with the latter having more focus on these aspects. Among private sector universities, some schools have provided specially designed places for casual social interaction.

7.5.4 Teaching pedagogies and institutional habitus grouping

Teaching pedagogy, including design studio teaching which elaborates the normative structure of the school, is the most crucial aspect of institutional habitus. As identified earlier, teaching pedagogy is investigated through two approaches; one is to understand the pedagogy defined by the school that is examined through the information available on the websites of these schools. And second is the investigation of pedagogy beyond the defined

practices, done through the examination of students' perception of teaching practices in the school. While exploring the pedagogy, school's curriculum is also discussed as it impacts the pedagogy.

	Universities Name	Educational Provider & University Ranking		Institutional Habitus groups of the Universities	
				Grouping based on University Ranking & Schools' Pedagogy	Grouping Based on Pedagogic Focus
1	Indus Valley School of Art & Architecture	Private Sector	High Ranked	Private Established	
2	Comsats Lahore				
3	Comsats Islamabad				
4	Beaconhouse National University		Low Ranked	Private Emerging	
5	University of Management and Technology				
6	Superior University				
7	University of South Asia				
8	Karachi University	Public Sector	High Ranked		Public Art
9	National College of Arts				
10	Punjab University				
11	University of Engineering & Technology Lahore				Public Engineering
12	NED University of Engineering & Technology				
13	Dawood University of Engineering & Technology				
14	Baluchistan University of Information Technology, Engineering and Management Sciences				

Table 7.2: Universities in the Study and their grouping

Before explaining the pedagogies of different universities in detail, the first and most evident factor is that in public sector universities there is a clear division in pedagogy based upon schools' placement in an engineering or art institute. Schools in art institutes, are more focused on artistic expression and grooming the personal outlook of the students. However, schools in engineering institutes are more focused on the technical aspects of the profession such as tectonic strategies rather than artistic expressions. So, these schools are sub-grouped

as "Public Art University Group" and "Public Engineering University Group". These pedagogies are further discussed in detail in the next section.

It is also observed that all the top-ranked private universities' schools of architecture were developed at least a decade ago, whereas low-ranked universities' architecture schools were established in the last 10 years. For this reason, these two groups are named "Private Established University Group" and "Private Emerging University Group". However, there is one university "Beaconhouse National University" which is ranked low on the HEC website. This university is older than 10 years, and by analysing its defined pedagogies it was found to be much closer to a private established university group, so, it is grouped under this category. Now schools in this study are divided into four groups, as identified in Table 7.2.

7.6 Teaching pedagogy and curriculum defined by the school

To understand teaching pedagogies defined by the schools the content provided on the school's websites was analysed in detail. This content is categorised under five factors as shown in Table 7.3. This includes 1) the focus of teaching in the design studio and the typology of the design projects through 1st to final year, 2) focus on different parts of course content, 3) focus on various aspects of teaching reinforced through time tables, 4) specialisations of faculty members, and 5) relations with other disciplines in the university context. These five areas are going to be discussed next, the detailed exploration of these aspects helps to understand the school's pedagogy.

- 1) In all schools "Design Projects" vary over the semester in terms of scale and focus. However, there is an underlying pattern discovered through analysing the information on websites and through field notes. In private established university groups, the scale of the project is not given a lot of importance; instead, the focus is on learning outcomes. Moreover, most of the time, the focus of projects is to understand and incorporate social and cultural diversity in design. Keeping the project scale smaller makes it possible for teachers to make students explore each and every aspect of the design, enabling a deep learning approach.

Areas Defining Pedagogy	University Groups			
	Private Established	Private Emerging	Public Art	Public Engineering
Design Projects over the semesters	Small scale projects with a focus on social and cultural diversity (Vertical Studio)	Small to large-scale projects with a focus shifting from technical aspects of design in the earlier year to handling design complexity in later years.	Small scale projects with a focus on artistic expression and form development.	Small to large-scale projects with a focus shifting from technical aspects of design in the earlier year to handling design complexity in later years.
The focus of Course Content	Design Studio, Architectural Analysis, Critical design, Practical experience (Internship), writing about architecture	Design studio, Building materials, and technology, environmentally sustainable design	Design Studio, Freehand drawing, and sketching, architectural history, Theory of Architecture	Design Studio, Building materials, and technology, environmentally sustainable design, architectural history
Different aspects of teaching reinforced through timetables	Primary focus on Design Studio	Primary focus on Design Studio	Primary focus on Design Studio	Primary focus on Design Studio
Specialisations of faculty members	Urban Design, Design Including Culture, Architectural history, Environmental design, socially sustainable design	Environmental Design, Urban design, Architectural history	Architectural history, Urban design, Architectural practices	Environmental design, Urban design, Architectural history
Relation with other disciplines	Collaboration with other disciplines including communication skills, liberal arts, and social sciences	Not a strong collaboration with other disciplines	A Strong impact of art culture	The strong impact of engineering Culture

Table 7.3: Five Factors defining Pedagogies

This university group also practices vertical studio in which mostly 3rd and 4th-year students work on design projects together. Design projects focus on private emerging and public engineering university groups is quite similar. In both university groups, the scale of the project is given importance, and it is increased with the semester. Emphasis is on understanding the design complexity as well as technical aspects of designing the structures and understanding the practicalities of construction. However, the large scale of projects makes it difficult for teachers to promote deep learning. Public art university groups do not have much emphasis on the scale of projects similar to "Private established university group", their focus is on the artistic expression of the design and conceptual thinking behind it. This is impacting the pedagogy of these schools as teachers spend the most time helping students to understand the theory of design.

- 2) The design studio is the most focused course in all schools. However, the focus on other subject areas is different in all schools. In private established universities the course content is more flexible and inclusive with more focus on grooming individual personalities and on social awareness regarding the role of this profession. In private emerging universities and public engineering universities, the course content is strictly defined, and the focus is more on completing the tasks designed for every stage, giving less chance for developing deep pedagogic relations by teachers and students. Public art universities have a focus on developing presentation skills to ensure the artistic expression of design; they also focus on the rich architectural heritage of the region.
- 3) While analysing the timetables of different university groups, no significant differences were found as all university groups have fixed 2 to 3 days for design depending upon the semester and credit hours.
- 4) Specialisations of faculty members are almost in similar subject areas for all university groups, with only one exception of focus on cultural inclusion in design in the private established university group.
- 5) Schools' relation with other disciplines in university is one of the most important factors defining the pedagogy of these schools, and it is most evident in public

universities. Schools in Public art universities have a focus on artistic expression more than the technical aspects of design because they are placed in a creative environment. 1st year of education in these schools is combined with other disciplines like fine arts, media studies, product design, etc., enforcing the focus on conceptual thinking and artistic expression. Schools in Public engineering universities have a focus on technical aspects of the profession because of their proximity to engineering disciplines like civil, electrical, and mechanical engineering. Schools in private established university groups are consciously determined to develop collaboration with other disciplines in the university, such as communication skills, liberal arts, and social sciences. However, schools at private emerging university groups do not show much interest in such collaborations.

7.7 Public Perception

So far, the university groups are determined based on their educational provider, admission policies, and schools' defined pedagogies. Before digging deep into the student's perception to explore the elements embedded in the teaching going beyond defined practices. There is another aspect concerning the institutional habitus of these schools, that is the public perception of these schools. As discussed in chapter 2 (section 2.12), institutional habitus needs to be explored by the structure agency duality. This means not only institutional habitus impacts individuals, but individuals also define it in return (Reay, 1998). For this study as well, people's perception of these schools is the factor impacting their institutional habitus. The defined teaching pedagogies, and for some schools, the long history of producing architects have created a public perception about them. The impression is that art schools produce architects with leading abilities, the "starchitects", and engineering schools produce competent practitioners; ideal to be hired in the firms as they are hard-working. Private schools are also perceived to be on this spectrum of starchitect and practitioners. This perception impacts the demographics of the students coming to these schools and as a result, keeps on defining its institutional habitus.

7.8 Teaching Pedagogy Investigated through Students' Perception

After forming the institutional habitus groups of universities, students' perception of teaching pedagogies in these schools is investigated against these groups. This investigation is conducted by students' perception of the taught and hidden curriculum in these schools. The purpose of exploring different aspects of the curriculum is to understand the school's focus on them. Understanding how the curriculum is being taught in students' perception makes it possible to understand the pedagogies of these schools. This exploration helps to understand the elements embedded in the daily life of the school going beyond the defined practices, as explained in Figure 7-2. This inquiry is conducted through two sources, quantitative survey, and qualitative interviews, discussed here separately.

7.8.1 Quantitative Survey

For the quantitative survey, the taught and hidden curriculum of these schools are examined from students' points of view by comparing university groups. The questionnaire for this survey was designed based on the explanation of the field of architectural education in chapter 4 (see questionnaire in appendix A). It explores students' perceptions of the taught and hidden curriculum. The investigation of the taught curriculum is based on the subject areas identified on the universities' websites included in the study. Students' perception of a total of 10 subject areas in their respective schools of architecture is investigated in this study. This includes design studio, manual presentation skills, computer-aided presentation skills, urban design, landscape design, architectural history, structure and construction, interior design, environmentally responsive design, and architectural practice.

Students' experience with the hidden curriculum that is identified by Dutton (1990) as one of the most important aspects of architectural learning (section 4.7) is explored next. It includes seven questions starting from the "importance of the verbal presentation skills" discussed as part of the field of architectural education in section 4.7.3. "School is a conducive environment for new ideas", partially discussed under the relationship of students and tutors (section 4.8). "Experience of the critique" discussed in detail in sections 4.7.3 and 4.9, "relation with tutors" and "faculty ability to provide inspiration" discussed in section 4.8 "Relation with non-academic staff" is not addressed in the description of the field as it was not mentioned in

literature. "Comfort with working in the studio for long hours" is discussed in section 4.7.6. "Satisfaction with choice of architecture at this university" is not a direct part of the hidden curriculum but indicates students experiences the learning in the school, hence an essential part of this inquiry.

For this investigation, data was collected from all 14 architecture schools included in the study; these schools are in four cities in Pakistan. A total of 1345 students responded to the questionnaire with 1330 useable responses (explained in section 6.16). The number of responses from each university group is mentioned in Table 7.4. Collected data is analysed using Excel and SPSS to understand students' perceptions of the taught and hidden curriculum across different university groups.

	Number	Percentage
Private Est.	427	32.1
Private Emer.	232	17.4
Public Art	258	19.4
Public Eng.	413	31.1

Table 7.4: No. of Respondents from each university group

To understand students' perception of the taught curriculum, they were asked in the questionnaire that how much emphasis is given to different subject areas in their school. Response to each subject area is cross-tabulated with university groups. The Chi-square result of these cross-tabulation shows statistically significant evidence of a very strong association between perceived emphasis and the university group ($p < 0.01$). Moreover, 0 (0.0%) cells have an expected count less than 5, so the null hypothesis is rejected, and the results are statistically significant for all subject areas.

There are 10 subject areas in the questionnaire shown in Figure 7.3 at the bottom of the image. So, the cross-tabulations create 10 different tables; each table provides the response of students from various university groups to 1 subject area such as design or manual presentation skills (See appendix B, tables B-1 to B-10). While reading these tables individually, it is difficult to find a relationship in data, so all the tables are combined as one, with each university group responding to all 10 areas of the taught curriculum in one place (appendix B, Table B-11). These responses are put together in the form of percentages rather than counts to clearly understand what they mean, counts are not included to make the table

manageable to read. Mean values are created through these responses depending upon the position of the response on a 4-point Likert scale. This means strongly emphasised is given 40% weightage, moderately emphasised is 30%, slightly emphasised is 20%, and not at all is 10%. This study acknowledges that the difference between strongly and moderately emphasised is not necessarily the same as moderately and slightly, so these percentages are not a direct representation of the gap. Instead, it acknowledges that a higher percentage of “strongly emphasised” identifies a more positive response hence given the highest weightage, and so on.

Based on Table B-11 (see appendix) the mean percentages are combined in Table B-12 (see appendix). These mean percentages are represented in Figure 7-3 through a line chart to compare the responses from different university groups. Mean percentages on the vertical axis are represented in a range of 20 to 40 percent, as all the variation of responses lies within this range. This way of representing the data enables us to understand students' perception of the taught curriculum in university groups by comparing the responses in all groups. The first observation from Figure 7-3 is that students in the private established university group have given the highest ranking for 7 out of 10 subject areas, showing that these schools are performing well in providing satisfactory learning.

All university groups have the highest emphasis on design studios which is understandable, but the focus on other subject areas varies greatly, and it communicates essential findings of the pedagogies of these schools.

Private established university groups have the highest emphasis on two of sub-design fields that are urban and landscape design but do not have a strong focus on interior design. This is in line with their pedagogic claim of emphasising the aspects regarding social and cultural issues. However, these schools do not claim to be focused on environmental aspects of design in their pedagogy, but according to students they are, this communicates that they are committed to practical aspects of design as well. Schools from private emerging and public engineering universities have very similar pedagogic claims of focus on practical aspects of design; this claim is proving to be true for public engineering schools as they have the highest emphasis on structure, construction, and environmental issues of design. But it is not valid for

private emerging university groups, as according to students' perception, they do not have a high focus on the technical subjects.

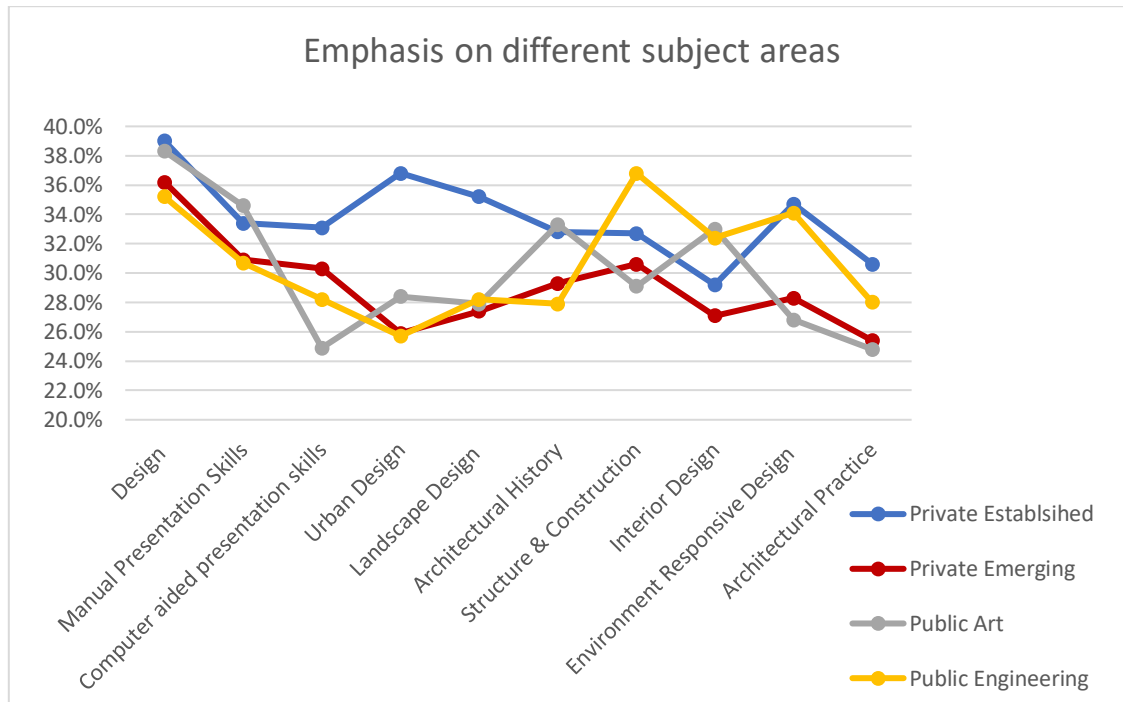


Figure 7-3: Students' perception of emphasis on different subject areas.

Another important observation regarding schools from private emerging university groups is that these schools are not performing well in terms of providing a satisfactory level of education, as students have ranked the emphasis on all subject areas lowest among the university groups. The most significant indication of schools from public art schools being focused on traditional artistic expression is the difference of focus on manual and computer-aided presentation skills. These schools are practicing the highest attention on manual presentation skills among all university groups, and the lowest focus on computer-aided presentation skills. Also, they are highly focused on architectural history and interior design, this is in line with their claimed pedagogies as well.

In terms of the hidden curriculum, students were asked about their experience with different aspects of architectural education in the school. There are 6 aspects of hidden curriculum investigated in this study that is mentioned in Figure 7-4. Responses to all these 6 aspects were cross-tabulated with the variable, university groups (Table 2). All these cross-tabulations show a statistically very significant association in chi-square results ($p < 0.01$). Results of these

cross-tabulations in the form can be seen in appendix B in the form of tables (Table B-13 to B-18). Figure 7-4 shows the result of these cross-tabulation tables in the form of bar charts by adding the percentages of negative (strongly/somewhat disagree) and positive (somewhat/strongly agree) responses.

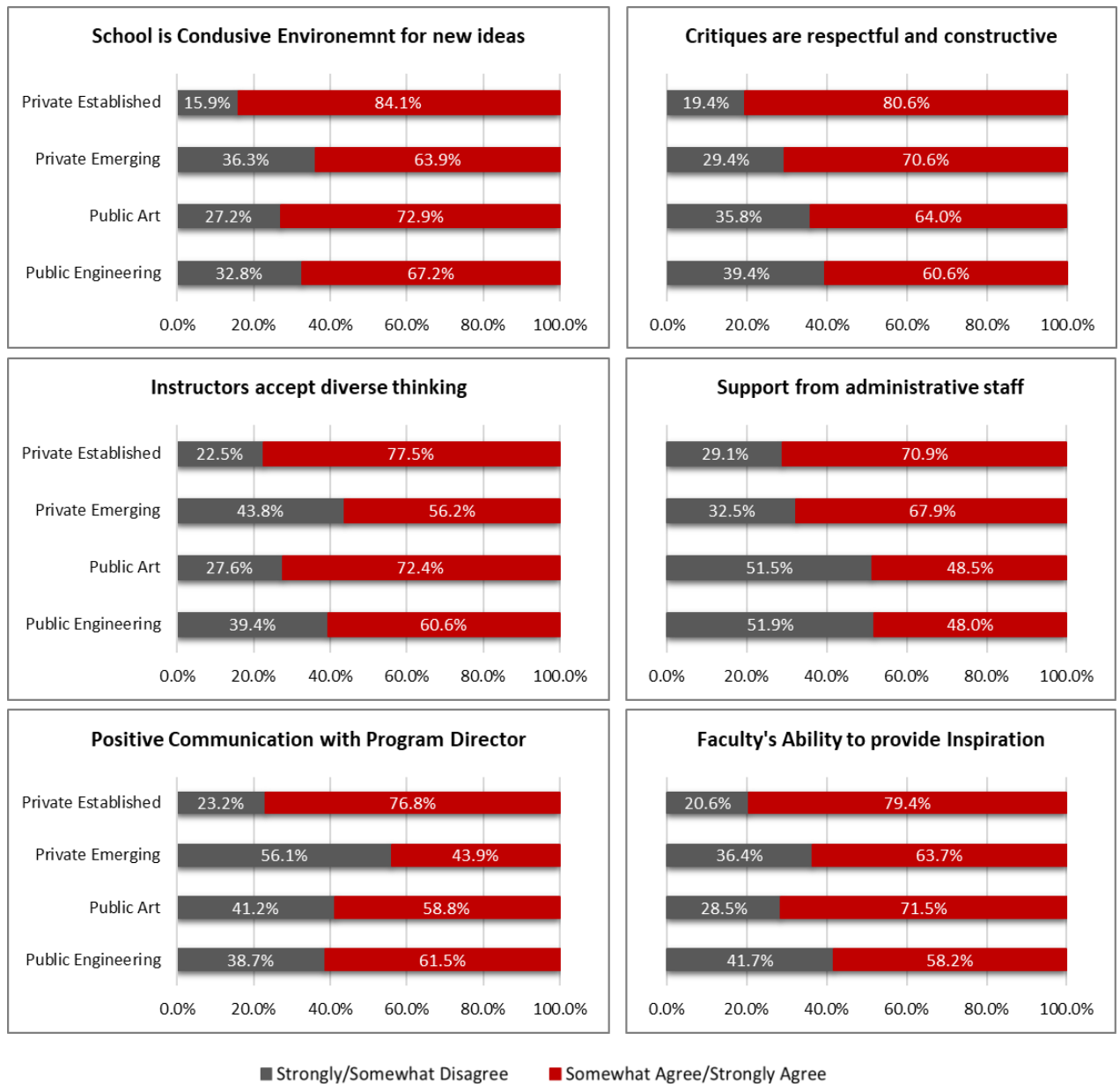


Figure 7-4: University Group Response to Hidden Curriculum

Students at private established universities show the most positive response to all the questions; the sum of their positive responses is significantly higher than students from all other groups of universities. Students at Private emerging universities show the least positive

response for 4 out of 6 questions; they show the most negative response to "Positive communication with program director". However, the most positive response by the students at this university group is to the question of "Support from administrative staff". At public art universities, students showed varied responses to different questions. They gave a better response to the questions that are focused on the critical environment of the school and gave the most negative answer to the question "support from administrative staff". At the public engineering university group, students' response is on the less positive side for most answers with the most negative response to "support from administrative staff".

These findings give an insight into the teaching pedagogy of these schools in further detail. As it is explained in Table 7.4 that the curriculum of private established universities is much diverse, with a focus on social inclusion. Results from students' responses show that students at these schools are most satisfied with the taught and hidden curriculum. Private emerging universities with a pedagogy more focused on completing the different contents of curriculum are failing to satisfy their students both in terms of the taught and hidden curriculum. Students at public art universities are satisfied with the critical environment of the school, as they gave the highest response to the question of school being a conducive environment for new ideas. In contrast, students at public engineering universities are not very satisfied with the critical environment of the school, but they are satisfied with the focus on technical aspects of the profession in the taught curriculum.

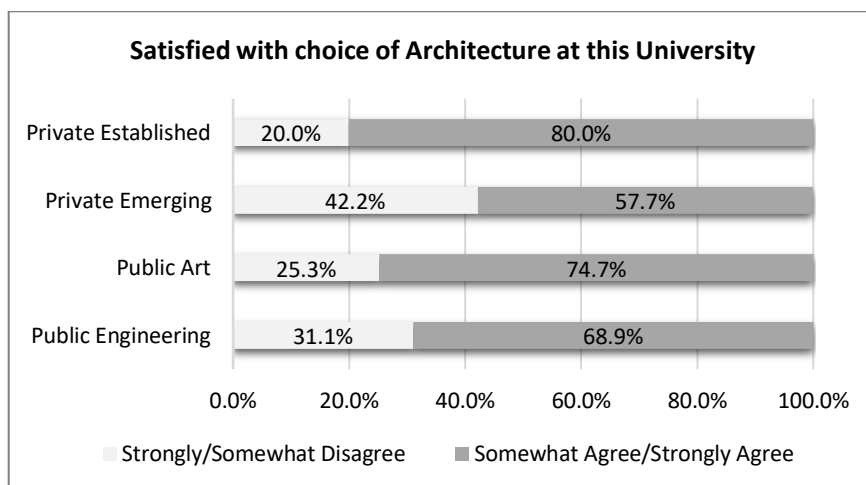


Figure 7-5: University Groups Response on Satisfaction with the choice of university

After this analysis, it comes as no surprise that students at the Private established university group are most satisfied with their choice of architecture at these universities (Figure 7-5, based on Table B-19 in appendix). After Private established universities, students at public art universities are most satisfied with their choice of architecture at this school. This analysis also shows that although schools at private established universities are performing better than the rest of the university groups in taught curriculum, and most areas of the hidden curriculum, each school possesses its strengths and weaknesses.

7.8.2 Qualitative Interviews

In the next stage, the teaching pedagogy of these schools is investigated through the qualitative interviews conducted with 44 students in different university groups.

Marshall et al. (2013) identified the number of interviews in the highest impact factor studies published in the year 2008-2013 and made a recommendation based on it for the suggested number of interviews. This number is 25-30 interviews for grounded theory studies and 15-30 interviews for single case studies. They also suggested justifying the number of interviews based on the research plan and objectives for the study at hand. In the current study conducted interviews belong to four university groups, and the minimum number of interviews in each group is 10. This number is based on the recommendation that theory structuration can be based on a detailed analysis of at least 10 interviews (Strauss & Corbin, 1998) as mentioned in chapter 5. So, interviews are conducted with 12 students from private established university groups, 10 from private emerging university group, 11 from public art university group, and 11 are from public engineering university group (Table 7.5). These interviews are transcribed and coded using NVivo 12. Unlike provisional and eclectic coding in the pilot study (section 5.8.4), open coding is used for the investigation of institutional habitus. Open coding is recommended if there are no prior assumptions for the findings (Blair, 2015). This coding process is used to ensure that each quote by all students discussing their school's pedagogies is included in the codes. After the coding is complete, it is peer-reviewed for biases with the help of a colleague. For each university group, the answers started repeating while coding the 9th or 10th interview, indicating that saturation is achieved.

University Groups	Number of Interviews
Private Established (Group A)	12
Private Emerging (Group B)	10
Public Art (Group C)	11
Public Engineering (Group D)	11

Table 7.5: Number of interviews from each university group.

To understand the teaching pedagogy, students were asked questions about their experience of learning in the school. Some of these questions are focused on exploring the taught and hidden curriculum, and some are open-ended (Figure 7-6). For the taught curriculum, students' perception of focus on different subject areas is explored similar to quantitative study. But unlike it, students are not provided with a list of subject areas; instead, they are asked to identify the most critical subject area or multiple areas in their school. It is clear from the literature review that studio design is the most important aspect of learning in the school of architecture (section 4.6). So, to understand the focus of the school in design studios, students were asked for the most helpful or challenging design project they have taken up in the school. This question was asked in various ways during semi-structured interviews, but in all cases, the focus of the question is that, which project students have found most interesting in learning to design, or most difficult giving them the toughest challenge in design. The focus of these questions is to understand what aspects of design are focused on by the school, as students were found to be focusing the same elements in their discussion, and a clear distinction can be seen among different university groups.

Questions exploring hidden curriculum are based on the summary of the aspects of the hidden curriculum discussed in the literature review (section 4.7). Three questions are asked in this exploration, including students' perception of guidance provided by teachers, interaction promoted by the school among students, and satisfaction with the learning environment of the school. And the last two questions are somewhat open-ended, targeted to get information from students not listed under any defined interview questions. These questions include what they like about studying in this school, and what they don't like. Response to these questions for all university groups is discussed in comparison to each other.

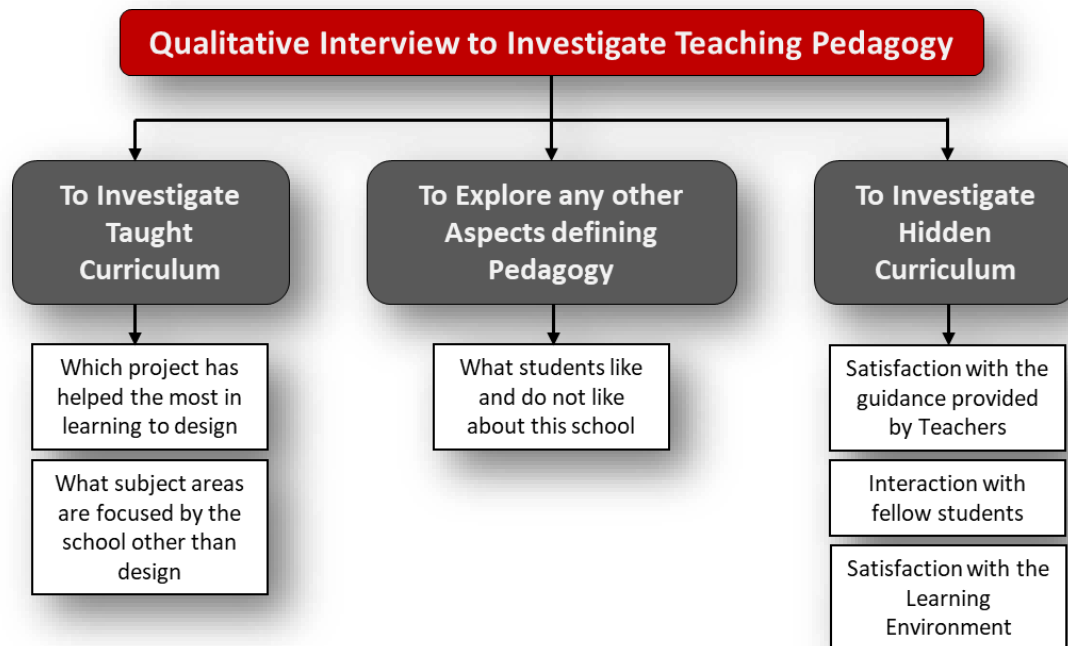


Figure 7-6: Breakdown of Qualitative Interviews for investigating Teaching Pedagogies

Private Established (University Group A)

Taught curriculum

In terms of taught curriculum, almost all students from university group A clearly identified projects that are more focused on social inclusion and community development as the most important ones in helping them to learn to design.

We designed a community center, where we had to interview the local community in order to understand what their requirements are and then had to create the design according to it. I think it helped me a lot as it gave me exposure to how to link architecture with the social life of people, and that is the goal of being an architect I believe. (Student No. 1)

The projects students identified as the most important ones included community centers, housing for the less fortunate, museums, old age home, exhibition spaces, and art galleries. In terms of subject areas majority of students from these universities, group said that history and theory of architecture are focused the most, but other subject areas are also given importance. Also, teachers are focused on incorporating these subjects in design.

Teachers focus on all subjects; in fact, I think the history of architecture is a little too much focused. But I like the theory of design; I think that helps to think about architecture deeply. (Student No. 3)

I think there is a serious effort by our teachers to make us realise that incorporating all subjects into the design is very important. It is not always easy to achieve but when teachers demand this from us at least we start thinking about it. (Student No. 7)

Hidden Curriculum

For hidden curriculum, the first question is based on the guidance provided by the teacher. Response from this university group students shows a relationship based on mutual understanding among teachers and students. Almost all students expressed contentment with the guidance provided by the teacher, as one of the students says in the interview:

Teachers have always been approachable; I have never found it challenging to discuss whatever issues I am facing in a project. (Student No. 4)

Even if students reported some undesirable behaviour by teachers, they always tried to justify it.

Teachers have this routine of crushing the building models and saying that we need to break our egos, it was strange for me like they could give me bad grades why they had to crush my models or tear up my sheets. But this is something I understood later that by damaging our physical property they were training us. (Student No. 10)

I think teachers require you to do some work and then expect something from them. They will not talk to you for long if you do not have any work to show of course, but if you show them that you have done a reasonable effort and still having trouble with something then they are happy to guide. (Student No. 12)

Also, many students pointed out the importance of taking responsibility in learning rather than expecting everything from teachers. As they said that "guidance depends upon students", "teachers cannot spoon-feed and tell what to design exactly". For relationships among peers, students from both university groups A and C showed a similar response that there is a good interaction among students in the school. At university group A, there seems to be a serious effort by the schools to promote such interaction by vertical studios and school societies. One student identified being in the school as "being part of a big community".

Yes, I think there is, and that is because of the vertical studio. We always at least know the students in the above and below years. Some students who are more social have their personal contacts as well but for example, a person who is not very social still knows at least their immediate juniors and seniors. (Student No. 5)

For satisfaction with the learning environment, students from various university groups have very different focuses in their answers. Almost all students from University Group A and B talked about intellectual environments, this is because since practical facilities are not a big problem in these schools, they are not concerned about them. Also, students from group A showed satisfaction with the learning environment in their school.

I think the learning environment depends upon the students, it depends upon teachers as well though, but I think our teachers are concerned to maintain positive energy in the studio. (Student No. 1)

Likes and Dislikes about the school

Most students from university group A identified the interactive and easy-going environment of the school as the point they admire the most about their school. And the negative point identified by most students is the enormous amount of work they have to do, the other negative point by some students is that the school seems isolated from the architecture community of Pakistan in general.

I like the culture of the school; it is very easy going... teachers are like friends here; I feel here we get to explore ourselves more than just learning about architecture. (Student No. 9)

I feel this school's community is too isolated from society in general. We are all fantastic people, and we have such a good time with each other, but I feel we need to open more and reach out to other schools. (Student No. 8)

Private Emerging (University Group B)

Taught Curriculum

In the university group, B social factors of design are not discussed at all and students identified the projects with design complexities as the most helping ones in learning to design.

I think the large-scale projects we have worked on in the last semester that was a university and in this semester that is a hospital is giving a tough time. The design is very complicated as there are a lot of factors involved so I think I am learning a lot from these. (Student No. 13)

The identified important projects by students in learning to design are hospitals, airports, high-rise multipurpose buildings, and universities. Moreover, in this group, all students gave a negative response to questions on taught subjects, as they identified that these subjects are in complete isolation from each other and it doesn't enhance their knowledge to be incorporated in the design.

We study in too much isolation; we learn a lot of subjects, but we never learn to incorporate them in design, and we forget what we learned after passing the exams. (Student No. 21)

We focus a lot on subjects as we have large assignments for every subject that require a lot of time and hard work. I think these subjects need to be incorporated more in design so that we use them on real projects we are working on. (Student No. 14)

Hidden Curriculum

Students from this university group showed a lot of negative responses towards the attitude of teachers, which shows an unhealthy relationship among students and teachers in the school.

I think teachers are a little strict on us, they could be more understanding, they demand a lot of work that is sometimes unrealistic and if we don't deliver, they will even insult us. (Student No. 17)

However, it is also evident from many students' responses that they rely too much on the guidance provided by the teachers. Moreover, most students have an appalling response to interaction among peers, it is even identified as bad behaviour by one of the students.

Teachers leave everything on students. We must figure out what we want to do and how to do it. Even if we want to discuss with them the difficulties we are having, they just say that we need to figure everything on our own. (Student No. 14)

The students with a casual attitude towards learning are more into making friends and spending time with them, but I think that kind of interaction is not healthy among students as it makes you waste your time only. So that is why I try to stay away from such groups and focus on my studies only. (Student No. 15)

In terms of the learning environment of the school, students from this university group have a similar focus as university group A as mentioned before. They talk more about the learning environment of the school rather than the physical environment. However, unlike group A they are not very positive about the learning environment of the school.

I think the environment is a bit complicated in this school. There are two kinds of students here, the serious ones who want to study, and the other type are the students who could not get admission anywhere else and their parents or family members forced them to get admission here so that they would do something in their life. These students, mostly coming from wealthy backgrounds and a bit spoiled are not serious about studying, and that is why they sometimes disturb the learning environment in the studio. (Student No. 19)

Likes and Dislikes

Most students at university group B identified the best point of the school is that it is giving a chance to students to be architects even when they could not perform well in the secondary education, and now they have the chance to prove that they can be serious in life. Among the most negative things, some students identified the same issue of having to work too hard, but many of them identified another problem that school is too much focused on money-making and not on quality control. So, the same characteristic is identified as good and bad by various students.

I like that this school has given me the option of studying architecture. Frankly speaking, with my performance in secondary education I could not get admission in any engineering school and I am happy here. (Student No. 22)

It gives admission to a lot of students who are not serious about learning, I feel the school is only focused on making more money and that is why not maintaining the standard in terms of admissions. (Student No. 17)

Public Art (University Group C)

Taught Curriculum

In university group C critical thinking of design and theme development is given the most importance by most students, however, social inclusion is focused to some extent as well.

Most of the projects we work on are difficult in terms of developing a good design strategy or theme. Justifying why we are doing what we are, which can be difficult to do. But the project of the art gallery was good because finding inspiration for it was not so difficult. (Student No. 26)

In this group, the most critical identified projects are art galleries, community centres, and museums. Students identified history and theory of architecture as too much-focused subject

areas, they also showed discontent with the focus on practical subjects like structures and construction.

We learn this subject (theory of Architecture) every semester, and I enjoy it as well. This subject helps to think about the basics of architecture and to think and develop design concepts. (Student No. 23)

I think the history of architecture is too much focused, we need to focus more on the structure and construction. If we don't know how a building is going to be constructed how can we work on-site after graduation. (Student No. 30)

Hidden Curriculum

Students from University Group C gave a mixed response to teachers' guidance, some of them said teachers are very empathetic and helpful and others gave a completely opposite reaction. Showing that there is not a single culture of teachers' students' relationship, rather it depends on the personal encounter of each student with the teachers.

Yes, I think teachers are helpful especially for students like me, who come from far away regions of Pakistan and they don't understand even the culture of big cities. Teachers know that it is difficult for us to understand architecture and that is why I think they are always helpful. (Student No. 27)

I think teachers are non-empathetic. They would expect so much work from us without thinking if it is even possible. (Student No. 33)

I feel like we have to run after teachers and they are never available to listen to our problems. I think they have a too casual attitude in the design studio. (Student No. 31)

In this university group, students have first-year common with other art disciplines like painting, sculpture, or product design, that is why their exposure with peers goes beyond their own department. However, when asked about the learning environment of the school students are immediately focusing on the physical learning spaces and show some discontent with them.

We have good interaction in the school. We even help our juniors and seek guidance from seniors. We also have a lot of societies within the school, so we get to spend some time with like-minded people. (Student No. 25)

I like working at home, I have my own drafting table and proper working place at home, so it is much more convenient for me to work at home. You know the facilities at this school are not very good we do not have central air conditioning, so it is tough to stay in studios for a long time. (Student No. 29)

Likes and Dislikes

Students at this university group identified that they like that the school has provided them a creative world where they can explore the freedom of expression. A lot of students did not talk about any negative point in the school, but according to some students' infrastructure needs to be better.

It is an entirely different world, when you enter into the gates of the school you become a part of it and this is something no one from the outside can understand unless they are a part of it, architecture is a whole different world, the way people talk here, communicate with others, the language and terms they use it is all different from the outside world. (Student No. 28)

Public Engineering (University Group D)

Taught Curriculum

In university group D the focus of the design studio is on design complexity like group B, and most of the students identified the hospital as the most challenging project to design, and the one they learned most from. Other identified projects included large-scale housing design and university design.

The most difficult project we have designed so far is a hospital, it was really complicated in terms of design relations. And I think I learned to handle difficult design situations through it. (Student No. 42)

For taught subject areas, students identified that all subject areas are focused, particularly materials and construction. But these subjects need to be incorporated correctly in design assignments.

I think we have a lot of focus on the technical subjects, which makes sense by being part of the engineering environment. But the problem is that we are bombarded with all kinds of knowledge about materials, construction, and structure. But then after the exams we completely forget what we learned. (Student No. 40)

I think we need to focus more on architectural practice and site handling, we are not getting good training on how to work as an architect. We study materials and structures, but we don't know how to use this knowledge in our design projects. (Student No. 35)

Hidden Curriculum

In university group D, a pattern emerges in students' answers, in the first-year students are not happy with the guidance as they cannot understand the teachers most of the time. But in the following semesters, the teacher-student relationship improves. One of the students even identified the reason for it and said that most of the students coming to public engineering universities group are from a science background so they need time to get familiarise with architecture.

I could not understand what teachers were saying in their lectures they were using words and terms that I never heard before, maybe being a science student, I was never focused on designing things like that. (Student No. 41)

The majority of students identified that teachers' students' relationship depends upon teachers, and not all teachers are helpful in the same manner. Some students even suggested that there is a practice of favouritism in the school.

It depends upon the teachers; some teachers are very encouraging, they will listen to your concept and see your design very carefully and by giving a lot of time, but some others are only there to make you feel how bad a designer you are, and they will reject anything you have designed even in the final juries, which can become very annoying. (Student No. 34)

Almost all students in this group identified limited interaction defined by gender, year of studies, the fact that you live in the university hostel or not. It is also recognised in most cases that interaction is restricted to group assignments. Also, similar to group C, students are extremely unhappy with the physical learning environment of the school.

Interaction is good among class fellows, but I do not think it is very good at the school level. I think the department needs to make some effort to develop better interaction among students. (Student No. 37)

I think we need better studios. The learning environment of these studios is not good, we have no air conditioning, Teachers are always asking us to stay in the studio and work, but how we are supposed to work in the studios in such bad weather. (Student No. 32)

Likes and dislikes about the school

Almost all students at university group D identified that they like the fact that they are studying in a very well reputed university. Many students had complaints about the physical

infrastructure of the school, and some of them identified the excessive focus on technical subjects as a problem.

I like that this is a very reputed university, and I hope after graduating from here I have a good chance of finding a job in a reputed architectural office. (Student No. 38)

Comparative Analysis

Based on Figure 7.6, Table 7.6 provides a comparative analysis of all the aspects investigated through the qualitative interviews. In the taught curriculum, the comparison of design projects shows that university groups B and D are focused on the scale of projects and the design complexities associated with them, rather than social or critical elements. Whereas university groups A and C are performing well on this front.

For the taught subjects, group A and C are more focused on the critical thought development of students, group D students however are not as dissatisfied with taught subjects as group B. Under the hidden curriculum, group A performs the best among all university groups. Group B performs the worst, and C and D are ranging in between.

While talking about what they like and dislike about the school, both group A and C students talk about the good learning environment of the school, although they identify the need for more interaction with the community outside the school. Group D students are happy about being in a well-reputed university without realising that these universities are not famous for their architecture programs. And group C students are just not satisfied with the school's learning environment.

7.9 Discussion

Institutional habitus is explored in this chapter under the three aspects introduced by Burke et al. (2013) as identified in Figure 7-2.

The first aspect that is the "Social composition of the school" is easy to understand, it is mostly defined by the educational provider (Public/Private Sector), as being part of the public or private sector determine the school fee which defines the social class of students coming to the school. However, schools in Private established university group offer some scholarships to students who cannot afford the high fee, which is confirming to their claim of social

inclusion defined under pedagogy. Nevertheless, these scholarships are very few and do not perform much in balancing the social structure of these schools. Moreover, the admission criteria are bound to enforce social segregation, as all university groups except the Private engineering group conduct interviews for admissions, and the extremely stratified early education system in Pakistan makes sure that students with more fortunate backgrounds are best speakers by getting expensive private early education.

The second aspect of "Defined practices of the school" explored through the school's defined teaching pedagogy allows understanding how these schools perceive and advertise themselves. Putting briefly, it shows that private established schools are more focused on social inclusion in architecture, Private emerging and public engineering schools are concentrated on design complexity, and technical aspects of design, giving less chance to develop deep pedagogic relations. Public art schools are focused on the artistic expression of architecture, which is an impact on the artistic environment in which the schools exist. This defines the teaching pedagogy of these schools, as they have the first year combined with fine arts and others arts discipline students.

The exploration of the third aspect that is "Elements embedded in the daily life of the school, going beyond defined practices" through quantitative and qualitative study with students, allows understanding the teaching pedagogy of these schools with much more depth. It enables to analyse if the claimed pedagogic practice of these schools is in line with the perceived pedagogy of students at the school, uncovering how these schools are performing. Table 7.6 provides a comparison of the three sources through which teaching pedagogy is explored. In the Private Established University Group, students' description of the teaching pedagogy is very much aligned with the claimed pedagogies. According to students in the quantitative survey, these schools are having the most focus on the subject areas that involve social interaction like urban design. Also, these schools are providing the most conducive environment to learn with the best support from teachers and staff. In the qualitative survey, they identified the design projects involving the community and social involvement as the most important ones. They identified that almost all subject areas are well focused by the school, and teachers require them to incorporate these subjects into design projects as well.

Moreover, they identified that the best feature of their school is that teachers are easy to approach.

University Group	Defined Practices	Embedded Elements	
	Schools' Defined Pedagogy	Students Perspective of Pedagogy	
		Quantitative Survey	Qualitative Interviews
Private Established (Group A)	Focus on grooming individuals, Exposure, diversity, Tomorrow's Vision, Social Responsibility, holistic thinking. Teaching by the vertical studio, balance of art and science of the discipline	Focus on subjects, including social aspects. A supportive environment in the school to explore personal skills.	Design Projects are focused on community involvement and social inclusion. Students like the learning environment but think it is isolated from the outside world.
Private Emerging (Group B)	Focus on course content and completing tasks. Providing guidance, problem-solving	Subjects are being taught in isolation. Teachers not very supportive	Focus on large-scale projects. Not a healthy relationship among teachers and students and among peers.
Public Art (Group C)	Knowledge and skill-based creative environment Critical thinking, analytical skills Architectural history	Focus on artistic expressions. Teachers helpful in studios but critiques are not respectful.	A strong influence of Art culture. Students are happy with the artistic environment of the school.
Public Engineering (Group D)	more focus on technical aspects of architecture. Focus on students training to meet certain criteria.	Focus on design complexity and technical aspects. Majority of students with a science background causing some difficulty in developing a learning environment	A strong influence on the Engineering environment. Students experience some discriminatory behaviour by the teachers.

Table 7.6: Explanation of Teaching Pedagogy by comparing the Three Sources

In the Private Emerging University Group, the students' description of teaching pedagogy is not aligned with the claimed pedagogic practice by the school. As students showed discontent with the teaching by identifying both in the quantitative and qualitative study, that other than design no subject is focused enough in the school. In the hidden curriculum, they showed the most positive response to support from the support staff, and not to any teaching activities. In the qualitative study, they identified large-scale projects with design complexity as the most

important one in learning to design. However, this identification is in line with the pedagogic claims of these schools. They also showed extreme dissatisfaction with the relationship with teachers, but they are appreciating that these schools are giving a chance to students who did not perform well in secondary education to get a professional degree.

In Public Art University Group students' response to pedagogy is in line with the claimed pedagogic practice in general. In the quantitative survey, the most focus among taught subjects is manual presentation skills and among hidden curriculum is "school being a conducive environment for new ideas". These aspects are confirming the schools' claim of focus on artistic expression. Students have identified that teachers accept diverse thinking (in the quantitative survey) and are mostly easy to approach (in qualitative interviews), but they have also recognised that the critiques are not respectful. Most helpful projects are identified to be the ones that require clear design strategy and inspiration, again confirming the focus on artistic expression. Students have concluded that the creative environment of the school is the best thing about it.

In Public Engineering University Group students' response is in coherence with the claimed pedagogies of school, that is having a focus on design complexity and practical aspects of design. In the quantitative survey, students identified that the most focused subject area after the design is structures and construction. In the hidden curriculum, they determined that schools do not have a very supportive environment for artistic expression. In the qualitative study, most students identified the hospital project as the most important one in learning to design, because of its scale and design complexity. They have also identified that a majority number of students come to these schools with a science background, and that is why they find architecture difficult in the beginning semesters, which impacts their relationship with teachers. According to almost all of the students in the study, the aspect they like the most about their school is that it belongs to a well-reputed university. However, all of these universities are famous for their engineering programmes and not architecture.

Table 7.7 provides a summary of all aspects of institutional habitus.

University Groups	Factors Defining Institutional Habitus			
	1. Social Composition of the school		2. Defined Practices of the school	
	3. Embedded Elements		Teaching Pedagogy	Physical Infrastructure
	Educational Provider	Admission Criteria		
Private Established (Group A)	Highly ranked (By HEC) Private Sector University. High Fee	Secondary education score 60% Extensive interviews, written & drawing test	Focus on grooming individuals, Exposure, diversity, Tomorrow's Vision, Social Responsibility, holistic thinking. Teaching by the vertical studio, balance of art and science of the discipline	New buildings, well-designed studios, and working places for each student. Well-designed and placed social places. Air-conditioned spaces.
Private Emerging (Group B)	Placed in Private sector university	Secondary education score 50% Interviews, written & drawing test	Focus on course content and completing tasks. Providing guidance, problem-solving. Not a healthy relationship among teachers and students and among peers.	New Buildings, studios with proper working places, Air-conditioned spaces.
Public Art (Group C)	Public Sector Art University or General University with Architecture placed in the Arts Department.	An aggregated score of secondary education, admission tests scores & Interviews	A strong influence of Art culture. Knowledge and skill-based creative environment Critical thinking, analytical skills Communication Focus on Architectural history	Old buildings with low maintenance, social places for students but not very well designed. No air-conditioned spaces.
Public Engineering (Group D)	Schools placed in Public Sector Engineering Universities.	Aggregated scores of secondary education and admission test that is common for architecture and engineering disciplines. High merits & tough competition for admission.	A strong influence of Engineering, more focus on technical aspects of architecture. Focus on students training to meet certain criteria.	Old Buildings with low maintenance, no focus on students' social spaces, no air-conditioned spaces.

Table 7.7: Summary of the Factors Categorising Institutional Habitus

The physical infrastructure that is a significant part of the "Embedded elements" is found to be based on the educational provider. All private universities have provided proper working studios; however, the difference between the two groups of private universities is that group A is also focused on giving adequate social interaction spaces to students, something group B is not focused on. In the two public university groups, the lack of appropriate working space is an issue for the students, but the issue is not the absence of a studio place as all these schools have purpose-built studios. But the problem is the lack of maintenance, storage spaces for students, and air conditioning. Air conditioning is the biggest issue identified by several students in qualitative interviews, as physical comfort is very important while working. Students at public university schools have explained that they prefer going home and working from there instead of staying in the studio, which has a negative impact on the learning environment of the school.

7.10 Conclusion

This chapter has categorised the school into four groups based on their institutional habitus. Grouping of the schools based upon this concept has the advantage of providing a well-developed theoretical framework that people have already used in literature. Also, considering the research question of this study that is based on the social background of the students, and that is explored through their cultural capital and habitus, exploring institutional habitus has provided a link with the overall scheme of concepts in the study.

The four university groups developed in this chapter provide a deep insight into the teaching practices of these schools. The relationship of these practices with students' social background is going to be explored in the next two chapters through the concept of cultural capital and habitus.

CHAPTER EIGHT

Investigating the Role of Cultural Capital in the Learning Experiences

8 Investigating the Role of Cultural Capital in the Learning Experiences

8.1 Introduction

This chapter explores students' cultural capital and their learning experiences. Based on the data collected through the questionnaire survey, a detailed analysis is conducted to investigate and categorise the student's cultural capital (Figure 8-1). This chapter discusses the relationship of students' cultural capital with their learning experience alone and in conjunction with the institutional habitus, that was explored in the previous chapter.

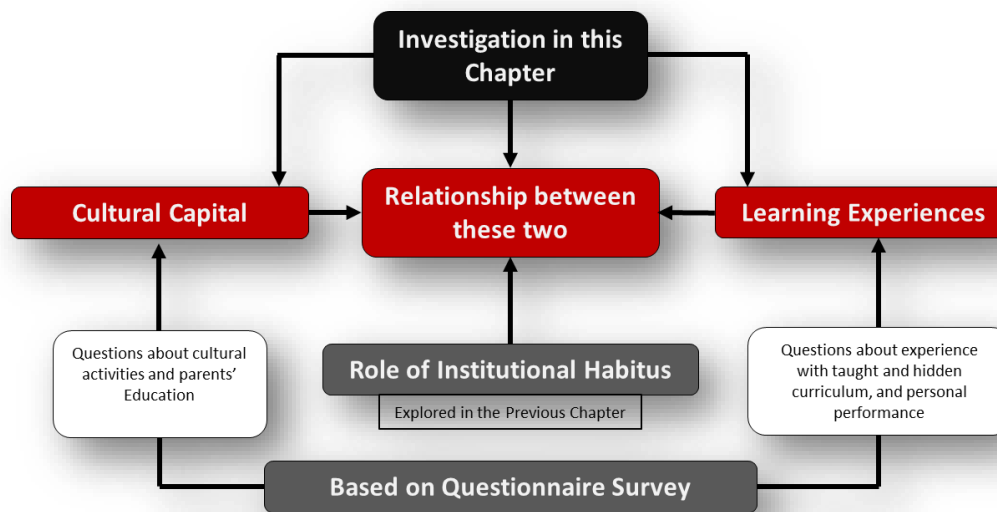


Figure 8-1: Structure of the chapter

8.2 Cultural capital investigation

Cultural capital is one of the central concepts in Bourdieu's theory of cultural reproduction (section 2.9.2). It is recognized as the key concept to investigate the impact of social class for this study (section 2.11). Investigating students' involvement in cultural activities in early life is identified in the literature as the most commonly used and suitable method for the investigation of cultural capital. Also, a quantitative survey is recognised as the most appropriate method for data collection to explore the cultural capital in chapter 6 (section 6.11.2 Investigating cultural capital). To investigate what questions should be added in the

questionnaire survey, a detailed analysis is conducted on the five most relevant studies investigating cultural capital. These are Sullivan (2001), Bennet et al. (2005), Noble and Davies (2009), Payne (2015), and Sortkaer (2019). Based on this, Table 8.1 identifies the factors on which the investigation of cultural capital is conducted.

Investigation into cultural capital	Sullivan (2001)	Bennet et al (2005)	Noble & Davies (2009)	Payne (2015)	Sortkaer (2019)
Participation in cultural activities as a child	✓	✓	✓	✓	✓
Cultural knowledge	✓	✓			
Fluency with the mode of expression	✓				
Cultural Taste		✓			
Parents Education			✓	✓	

Table 8.1: Adapted from Noble & Davies (2009), factors investigated for understanding Cultural Capital

Participation in cultural activities as a child is a common factor in all five studies, so the current study also investigates this factor. Parents' education is among the second most investigated factor, Bourdieu (1979) also identified parents' education as one of the most important factors defining cultural capital. He explained that young people in every family learn to see the world through their parents' eyes. Parents' influence on the formation of cultural capital is also emphasised in research (Crook 1997), as they invest in the child actively through cultural activities (Robson 2009). So, this factor is included in the investigation of cultural capital in this study. Cultural knowledge is not included in this study for two reasons. The first reason is that this study is not focused on any particular year in the school of architecture, and the questionnaire is filled by students from all five years of the architecture programme. Their current cultural knowledge is bound to be affected by the year they are studying in, as studying architecture exposes them to culture. So, understanding the direct impact of their social background on cultural knowledge was not possible without separating students into the year of study and accounting for this variation. For this reason, this aspect is not included in the questionnaire survey. The second factor is the length of the questionnaire, as it is designed for the investigation of both students' cultural capital and learning experiences, there was a risk of it being too long and not practical to be filled by a large number of students.

To keep the questionnaire reasonably short, only the most relevant aspects identified by Bourdieu and used by most research are employed in this research for the investigation of cultural capital.

The first ten questions of the survey form are based on investigating cultural capital (see the questionnaire in Appendix A).

8.2.1 Questions for cultural capital and relevance for the Pakistani context

Next, these questions are going to be discussed in detail, also their relevance with the context of Pakistan is discussed. The questions are based on three aspects, first is students' involvement in the art and culture activities in early education. Second is family cultural activities, and third is parents' education level.

For cultural activities within the school following questions are included, how often students attended art class, creative writing class, and music/dance class in school, also how often they got involved in extracurricular activities in school. These questions are based on the literature discussed at the beginning of this section; however, they are accustomed to fit the context. The first question is about art activities, in Pakistani society art is given a lot of importance and considered an indicator of being cultured. This comes from the rich art history of the sub-continent which kept on evolving after the independence (Dadi, 2009). Although there is a decline in art development in the country in recent years, mainly because of government policies, it is still considered an important part of the culture in the educated circles in the country (Dadi, 2009). For this reason, it is considered an important indicator of cultural capital in Pakistan. Literary writing is another important aspect of culture in Pakistan, historically this region has been a center of writers and poets, Lahore used to be called the city of literary writers in the Indian sub-continent (Jussawalla & Dasenbrock, 1992). Literary writing is still an important part of art culture in Pakistan and that is why an important indicator of cultural capital. Music has been a part of the culture in the Indian sub-continent from the very beginning, different forms of music have been part of Hindu and Muslim religion. After independence, Pakistan has produced many famous singers that made a mark on the music industry all over the world. So, music is an important part of art and culture in Pakistan and an indicator of the cultural capital. The literature discussed at the beginning of this section

also identified dance as a cultural activity. However, as Pakistan is a Muslim country, dancing is frowned upon in this society and that is why it is not very commonly taught and practiced. But at the same time, it is a popular activity in some circles, that is why this question is not eliminated, rather made part of music activity. Extracurricular activities such as sports and debate competitions are part of cultural activities in the most prestigious schools in Pakistan and are considered an important indicator of the cultural capital.

For family cultural activities the included questions are, as a child how often they used to go to a public library, how often they were encouraged to read other than course books by their parents, how regularly they attended cultural centers (museums/theatre/play), and how often they used to go on family holidays. Reading is an important indicator of cultural capital as identified in the literature. Its importance is emphasised in the literature in Pakistan as well, while highlighting the gender differences in reading habits of university students in Pakistan, Dilshad et al (2013), explains the importance of reading and its relevance to culture. Parents' encouragement for reading plays an important part in developing reading habits (Van Kleeck et al, 2003) and that is why this question is added to the questionnaire. Visiting art centers makes the young generation familiarised with the culture. In Pakistan, art centers are not very common but they do exist, especially in the large cities where this study is conducted. So, it is important to investigate how often students visited these centers as an indicator of how familiar they are with the culture. Going for family holidays is not identified in the literature as the indicator of cultural capital, but this question is added in this study. The reason for this is that traveling and going on holidays is not very common in Pakistan, and it is considered a luxury activity, but this activity is identified in the literature as familiarizing people with different cultures (Osborne, 2000).

Parents' education is also investigated in the questionnaire by asking students about their education level ranging from high school to PhD, as discussed earlier it is one of the most important factors in literature affecting students' cultural capital.

8.2.2 Exploratory factor analysis

Answers to the questions regarding cultural capital are coded based upon the Likert scale positioning. Where strongly disagree= 1, somewhat disagree= 2, somewhat agree=3, and

strongly agree=4. It is important to point out that these are not the values but ranking of responses from strongly disagree to strongly agree. To find a correlation in these variables, an Exploratory Factor Analysis (EFA) is conducted using SPSS. EFA is a statistical method that explores the underlying structure of a larger set of data, by amalgamating the variables with strong correlation, it reduces a lengthy question set to a minimal number of common factors (Moutinho et al., 2014). Observed correlated variables are reduced into a lower number of variables to form these factors. EFA does so by exploring which items load together and form factors based on it. EFA is a popular method used in education research for over a century and is a preferred method to be used for analysing the questionnaires where human beings report their experiences (Williams et al., 2010). In his work discussed in *Distinction* (1984) Bourdieu used correspondence analysis for quantitative data. However, it has a limitation that it can be used only for displaying relationships and not for hypothesis testing (Cockerham & Hinote, 2009). Cockerham & Hinote (2009) discussed the similarities in correspondence and factor analysis. Moreover, EFA is broadly used in literature for hypothesis testing (Cudeck, 2000) and that is why found suitable for the current study.

Based upon a literature review on EFA (Henson & Roberts, 2006; Williams et al., 2010) 5 steps of EFA protocol are explained here. For the current study, EFA is going to be conducted in these steps as well. These steps are:

1. Suitability of the data
2. Extraction method
3. Criteria in determining factor extraction
4. Selection of rotational method
5. Interpretation and labelling

1. Suitability of the data

The first aspect determining the suitability of EFA is the sample size. The minimum recommended sample size is 200, whereas, above 1000 is considered as excellent (Comrey, & Lee, 2013, P. 217). As the sample size of the current study is 1330 it is highly suitable for EFA. As next step, it is important to measure the statistical significance of EFA for the data, and that is done through several tables created in SPSS while performing the test. These include

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's test (Table 8.2), these tables and their significance is discussed next.

KMO and Bartlett's test (Table 8.2) identifies the relevance of EFA for the data in hand. In this table the value of Kaiser-Meyer-Olkin Measure of Sampling Adequacy is .872, which is considered as "marvellous" adequacy in the data, meaning the data is highly suitable for factor analysis. In Bartlett's Test of Sphericity (Table 8.2) the p-value is $p < 0.01$ which is a statistically highly significant value, so the null hypothesis is rejected as there is less than 0.1% chance that the results were the result of chance. It is vital to pass these two tests to prove that factor analysis is a suitable test for the data.

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.872
Bartlett's Test of Sphericity	Approx. Chi-Square	3856.119
	df	45
	Sig.	0

Table 8.2: Factor Analysis result (KMO and Bartlett's Test)

2. Extraction Method

There are several extraction methods used in research, most common of which are Principal components analysis (PCA) and Principal axis factoring (PAF). The literature identifies that when the data reliability is high and the sample size is larger, the extraction method will not have much impact on the results. Moreover, among these two, PCA is the default method used in SPSS, so the current research uses this extraction method.

3. Criteria in determining factor extraction

As part of EFA, the researcher needs to choose the criteria that determine the factor solution. The most used criteria include cumulative Percentage of Variance, Eigenvalue > 1 Rule, and scree test. All three of these methods are used for this analysis as the literature incisively recommends using multiple criteria for the strong reliability of test results. As Williams et al. (2010) quoted Thompson and Daniel (1996) "simultaneous use of multiple decision rules is appropriate and often desirable".

Total variance explained (Table 8.3) created as the result of conducting EFA on SPSS, provides the information on the cumulative percentage of variance and eigenvalue. Eigenvalue describes the amount of variance in the original variables accounted for by each component,

in Table 8.3 it is shown under the column “extraction sum of squared loading - Total”. The recommended eigenvalue is >1, meaning only the factor solutions with >1 value are extracted. In this analysis, there are two factors with >1 eigenvalue with a 67% cumulative percentage of variance. In the natural sciences, the recommended percentage is 90%, but in humanities, 50-60% is considered acceptable (Williams et al., 2010).

Total Variance Explained							
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	% Of Variance	Cumulative %	Total	% Of Variance	Cumulative %	Total
1	4.469	54.689	54.689	4.469	54.689	54.689	3.903
2	1.239	12.394	67.083	1.239	12.394	67.083	3.398
3	0.846	0.846	72.547				
4	.710	7.100	78.647				
5	.628	6.285	80.932				
6	.516	5.165	86.097				
7	.470	4.703	90.800				
8	.447	4.469	95.269				
9	.430	4.298	99.567				
10	.043	.433	100.000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Table 8.3: Factor Analysis result (Total Variance Explained)

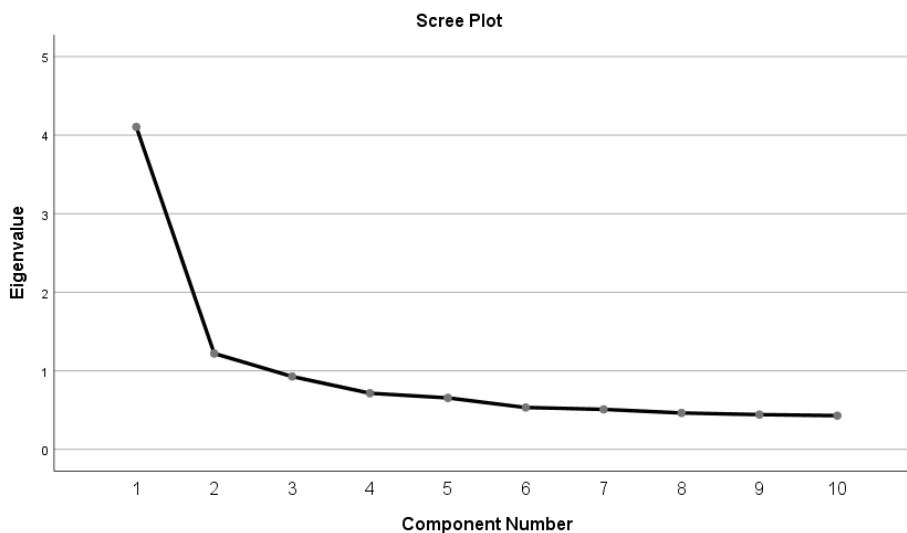


Figure 8-2: Scree plot for Factor Analysis

Scree test is shown through a scree plot, showing eigenvalue on the vertical axis and component numbers on the horizontal axis. The dots represent the number of factors, other

than the eigenvalue > 1 rule, elbow rule is used in scree plots to determine the factors that should be retained. Figure 8-2 shows the scree plot for the current EFA analysis, and it can be seen that there are two factors above eigenvalue 1. Also, the line bends clearly after the second factor creating an elbow, suggesting that the factors after this should not be retained. Therefore, based on all three criteria (cumulative Percentage of Variance, Eigenvalue > 1 Rule, and scree test), a two-factor solution is created in EFA.

4. Rotational Method

To ensure that appropriate factors are extracted, a technique called rotation is used. Choosing the right rotation is a part of conducted EFA, it means that the analysis is done by rotating the original axis so that they move in a position that can encompass data points in a better way. The option that allows correlation is called oblique rotation, and the one that assumes that factors are not correlated is called orthogonal rotation. Here EFA is conducted using oblique rotation as it is evident through KMO and Bartlett's test that data is correlated. Also, it is identified through the component correlation matrix that oblique rotation is suitable for this data set, as the correlation value of the two created factors is above the required value of 0.32, it is 0.332 as shown in Table 8.6.

5. Interpretation

Interpretation involves the observation by the researcher about the importance of variables in loading, and what variables are loaded together to form factors.

The Communalities table (Table 8.4) identifies the common variance shared by the variables. Higher communality of a variable shows that a more significant amount of the variance has been extracted by the factor solution. For a variable to be viable in a factor analysis solution, the communality should be 0.4 or higher, and this is true for all variables in this solution (Table 8.4). The value of the communality indicates the importance of variables for the solution, and in the present case, parents' education has the highest communality. This means that parents' education is the feature that influences all childhood cultural activities and therefore impacts the cultural capital the most. Among other variables, visiting Museums/Art Centres, extracurricular activities, and attending creative writing classes were found to be the most influential for cultural capital. The correlation matrix (appendix C, Table C-1) shows the

correlation value for each variable with all other variables, and all these correlations are statistically very significant ($P < 0.01$). All cultural activities have a strong correlation with each other; however, among parents' education, the mother's education shows a stronger correlation with cultural activities as compared to the father's education. It is indicating that the mother's education level influences cultural capital more than fathers.

Communalities		
	Initial	Extraction
Art class	1.000	.444
Creative writing class	1.000	.505
Music/dance class	1.000	.425
Extracurricular activities	1.000	.531
Visits to Public library	1.000	.398
Encouraged to read	1.000	.494
Visit to Museums/Art Centers	1.000	.537
Family holidays	1.000	.490
Father's education	1.000	.780
Mother's education	1.000	.720

Table 8.4: Factor Analysis Results (Communalities)

The pattern matrix (Table 8.5) shows the factor loading values. The First 8 items that include cultural activities in early education and family life load together under component 1, and parents' education load together under component 2, these are in fact the two factors in the data. The loading values of these variables (shown under components 1 and 2) again identify parents' education to be the most important variable in factors, followed by extracurricular activities and visit to museums/art centers.

Pattern Matrix		
	Component	
	1	2
Extracurricular activities	.749	
Visit to Museums/Art Centres	.743	
Family holidays	.690	
Creative writing class	.675	
Music/dance class	.669	
Public library	.652	
Art class	.645	
Encouraged to read	.585	
Father's education		.911
Mother's education		.779

Table 8.5: Factor Analysis Result (Pattern Matrix)

The results show that there are two factors in the data, one includes students' cultural activities in the early education and in family life, and the other is parents' education level. Based upon the coding for the Likert scale, values for cultural activities and parents' education are added separately, which creates two new variables by the name of cultural activities and parents' education. The statistics (Table 8.7) show that mean, median and mode values are very similar for both these variables, and also the histogram shows exact bell-like formation for cultural activities and bell-like formation with some skewness on the left side for parents' education (figure 8.3). Bell-like formation identifies normal distribution in the data.

Component Correlation Matrix		
Component	Factor 1	Factor 2
Factor 1	1.000	.334
Factor 2	.334	1.000

Rotation Method: Oblique with Kaiser Normalization.

Table 8.6: Factor Analysis Result (Component Correlation Matrix)

Statistics		
	Cultural Activities	Parents Education
Mean	20.27	7.32
Median	20.00	8.00
Mode	20	8

Table 8.7: Statistics for Cultural Activities and Parents Education

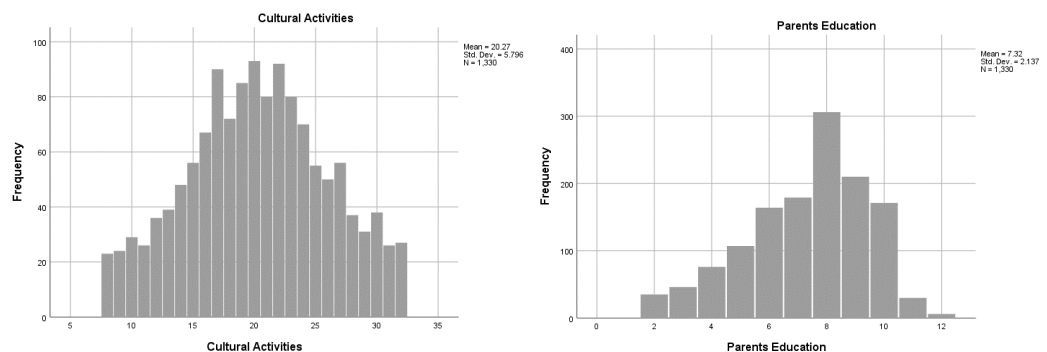


Figure 8-3: Histograms for Cultural activities and Parents Education

8.2.3 Scatterplot

As discussed in the previous section, two new variables of cultural activities and parents' education are created as a result of EFA. For the next step, a scatterplot is created by putting these two variables on the x and y-axis (Figure 8-4). This scatterplot identifies the position of

each student in the two-dimension plane based upon their cultural activities and parents' education. Each dot represents students' positions, the darker the dot is more students it is representing. X and y-axis are divided from the mean values of both variables, with cultural activities on the x-axis having a mean value of 20, and parents' education on the y-axis having a mean value of 7.32. This divided the scatterplot into four quadrants or four clusters of cultural capital described below.

1. Students with low cultural Activities and low parents' education
2. Students with high cultural activities and low parents' education
3. Students with low cultural activities and high parents' education
4. Students with high cultural activities and high parents' education

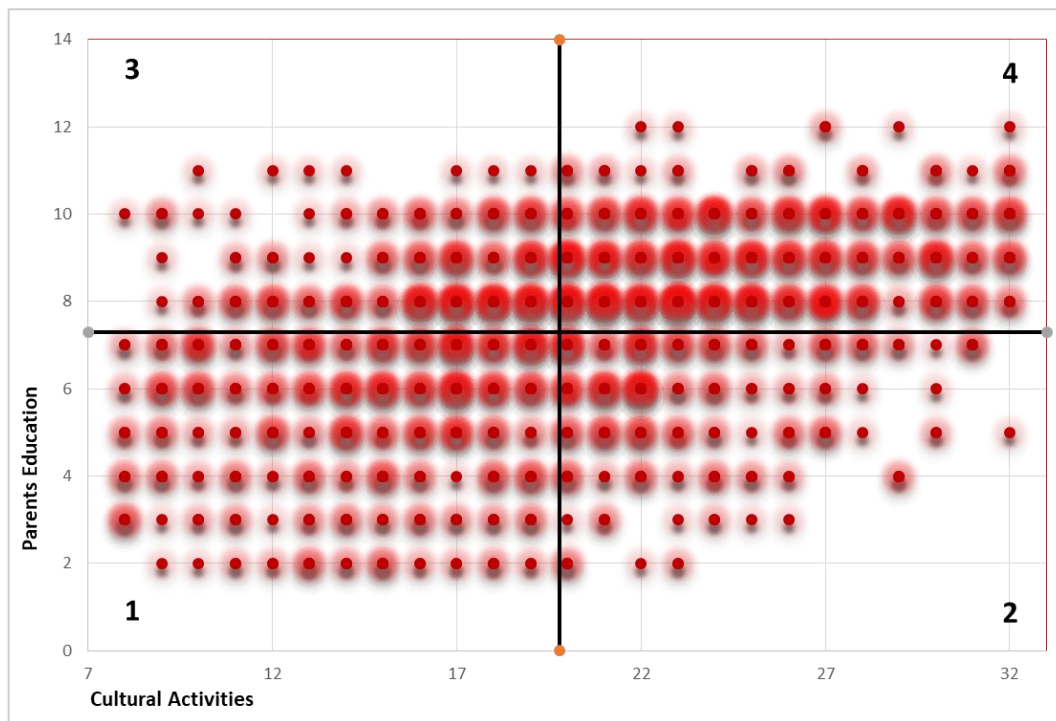


Figure 8-4: Scatterplot for Cultural Activities and Parents Education

Based upon their position in clusters, students were assigned a number 1, 2, 3 or 4 identifying their cultural capital. This solution is dividing the cultural capital into four clusters with an insight into the character of each cluster. The number of students in each cluster is shown in Table 8.8 under frequency. This four-cluster solution is used for analysing students' responses to different aspects of learning in architecture schools in relation to their cultural capital.

However, as clusters 1 and 4 are presenting low and high cultural capital groups, clusters 2 and 3 are both representing the middle cultural capital group, so they are joined to make one group (Table 8.9). Initially, the four-cluster solution is used to explore the relation of cultural capital with learning experiences, the three groups solution will be used as well in the analysis, and the reason for this will be explained. It is important to clarify here that cultural capital itself is not labelled as high or low, rather high cultural capital means the cultural capital of high or upper social class and so on.

Cultural Capital Clusters		
	Frequency	Percent
Cluster 1	385	28.9
Cluster 2	222	16.7
Cluster 3	210	15.8
Cluster 4	513	38.6

Table 8.8: Cultural Capital Clusters and the number of respondents from each cluster

Cultural Capital Groups			
		Frequency	Percent
Low	Cluster 1	385	28.9
Middle	Cluster 2 & 3	432	32.5
High	Cluster 4	513	38.6

Table 8.9: Cultural Capital Categories of Low, Middle, High Cultural Capital, and number of respondents from each group

8.3 Investigating learning experiences

The second part of the questionnaire investigates students learning experience of architecture in the school, and it is based on the practice of architectural education explained in the literature (Chapter 4). These questions and their link to the field of architectural education, as discussed under chapter 4 are explained here. The section of questionnaire exploring learning experiences starts by investigating the reasons for students' choice of architecture which is based upon their perception of the field of architectural education, defined by their habitus as discussed in chapter 4 (section 4.4). Students' reasons for choosing their school of architecture are explored next. After this, the questionnaire investigates the aspects that affect learning experience including, students' satisfaction with the taught

curriculum, their experience of the hidden curriculum, and their perception of personal performance, and satisfaction with it.

	Questions on the experience of architectural education in the Survey Form	Link to the field of Architecture
1	Reason for Choosing Architecture	Students Perception of the Field
2	Choice of School	
3	Satisfaction with taught curriculum	Aspects of Taught Curriculum as discussed in the field and mentioned on the websites of these schools.
Hidden Curriculum		
4	Importance of Verbal Presentation skills	Students' perception of how different aspects of hidden curriculum defining the field of architectural education (chapter 4) affects their experience of learning in the school of architecture.
5	School is a conducive environment for new ideas	
6	Experience of the Critique	
7	Relation with the Instructors	
8	Faculty's ability to provide inspiration	
9	Relation with non-academic staff	
10	Satisfaction with the choice of Architecture at this university	
Reflection on Student's Performance		
11	Satisfaction with performance in the school	Students Reflection on their performance and experience with different aspects of the field of architectural education discussed in chapter 4.
12	Confidence at the beginning of the subject	
13	Willingness to try out new ideas in the design studio	
14	Dependence on the guidance provided by the teacher	
15	Confidence in interacting with the fellow students	
16	Comfort with architecture as compared to the first year	
17	Comfort with working in the studio for long hours	

Table 8.10: Questions included in the survey form and their link to the field of architectural education discussed in chapter 4.

Students' satisfaction with the taught curriculum in the school is explored through their perception of emphasis on each subject area, versus their perception of the importance of that subject area. A similar investigation is also conducted by Payne (2015) to understand students' perception of the curriculum. Questions exploring students' experience with the hidden curriculum are explained in the previous chapter (section, Quantitative Survey), in this

chapter they are identified in Table 8.10. In the previous chapter, these questions were explored in relation to university groups, here they are explored in relation to cultural capital clusters.

A new aspect explored in this chapter is students' performance in the school of architecture in relation to their cultural capital. Students were asked to evaluate their performance in the school as a reflection on their performance, an idea introduced by Schön (2017) as discussed in section 4.6.3. Included questions are mentioned in Table 8.10. Survey response is analysed using Excel and SPSS to identify students' learning experiences by comparing responses among different cultural capital clusters. Results for each question are explained in the sub-sections below.

8.3.1 Perception of architecture

As an indicator of their perception of this profession, students were asked the reason for the choice of architecture. To see the relation of their responses with their cultural capital, the two variables, "cultural capital clusters" and "the reason for the choice of architecture" are cross-tabulated. Results of the chi-square under cross-tabulation show statistically significant evidence of very strong association ($p < 0.01$), and 0 (0.0%) cells have an expected count less than 5, so the null hypothesis is rejected. The results of cross-tabulation are represented through bar charts in Figure 8-5. Students who entered architecture by being attracted to the profession indicate that they had done some research on the profession and develop an understanding before getting admission to the school.

The highest number of students in cluster 4 that is 49%, got admission to the school by being attracted to the profession. This shows that a maximum number of students with high cultural activities and parents' education understand the profession before entering the school, whereas the number of students getting into the school by choice reduces in other clusters. The percentage is 38% for cluster 3, 27% for cluster 2, and 24% for cluster 1. Entering architecture by parents' advice indicates that they did not understand the profession, and they did not make the career choice themselves rather they are dependent on the guidance provided by the parents. The difference between all clusters on the choice of entering the

profession by parents' advice is not very significant; from cluster 1 to 4, it is 23%, 21%, 22%, and 28%.

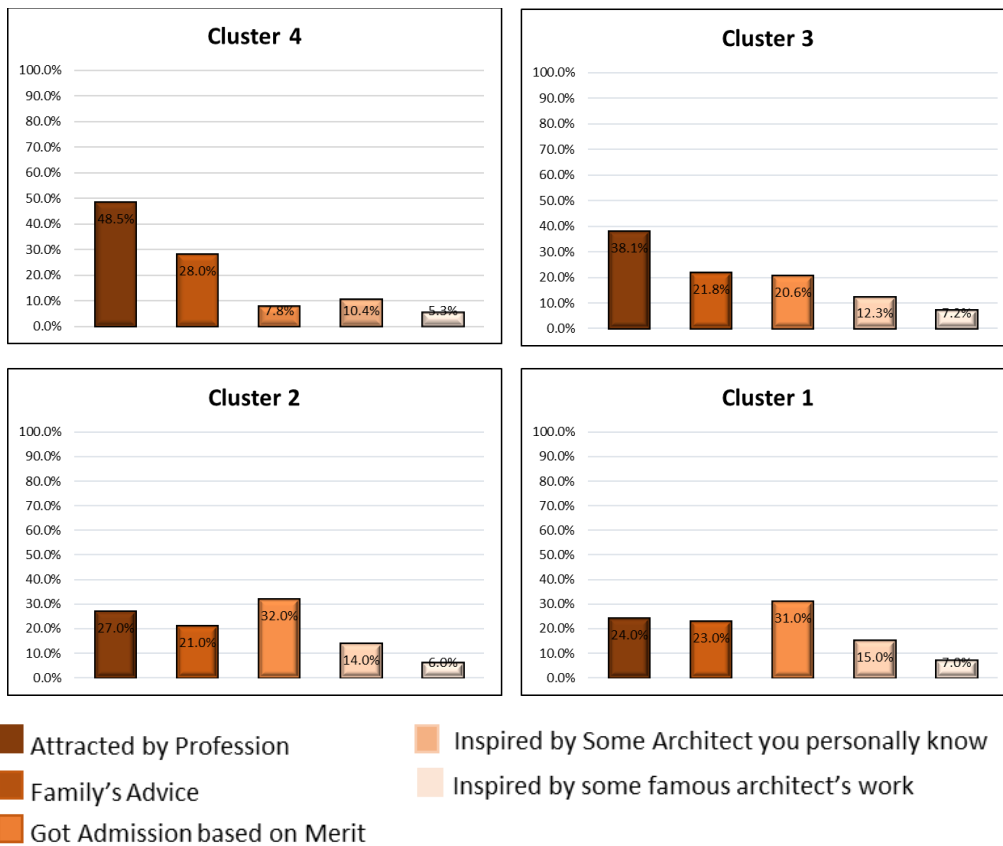


Figure 8-5: Bar charts showing cultural capital groups' reasons for choosing architecture

However, the difference is very clear for getting admission on the assigned merit by the university admission system, and this indicates a very important result. It shows that these students have no understanding of architecture and its learning requirements, and they entered this profession only because it was assigned to them. A maximum number of students from clusters 1 and 2, that is 31% and 32% entered architecture school by getting admission on merit. The percentage is still higher for cluster 3 students, that is 21%; however, only 8% of students from cluster 4 entered the school for this reason.

Some students in each group got admission in the school by getting inspired from some famous architect or some architect they personally know. However, the percentage of these students is quite similar in all cultural capital groups and does not communicate any significant differences.

These results indicate that a high value of cultural activities and parents' education is enabling the maximum number of students from cluster 4 to possess an understanding of the profession of architecture, and they get admission in the school by their own choice and likeness for the profession. Also, as the value of cultural activities and parents' education reduces, students' reasons for entering the profession move away from an understanding of the profession and they start relying on other's opinions and following merit-based allocations.

8.3.2 Choice of school

	Reasons for getting admission	Cluster 4 (%)	Cluster 3 (%)	Cluster 2 (%)	Cluster 1 (%)
1	Academic Reputation	96	82	76	72
2	Campus Atmosphere	49	38	44	47
3	Family Consideration	78	62	44	33
4	Employment Prospects	43	79	86	63
5	Cost	16	63	56	81
6	Scholarship from the university	0	0	2	8
7	Location of University	23	36	27	46
8	Knowledge of current Faculty	83	18	29	21
9	Desire to work with a particular Organisation	31	19	12	8
10	Resources at this School of Architecture	38	35	29	32

Table 8.11: Students' response to the reasons for getting admission in the schools of architecture

To understand the factors defining their career choices, students were asked the reasons for selecting their school of architecture. They were asked to choose all relevant reasons for getting admission to their school from a list of possible reasons (Table 8.11). The result is computed manually by calculating students' answers from each cluster and shown in the form of percentages. The top three reasons by the students from cluster 1 are cost (81%), academic reputation (72%), and employment prospects (63%). The top three reasons from the cluster 2 and 3 are similar and they are employment prospects (86% & 79%), academic reputation (76% & 82%), and cost (56% & 63%). The top three reasons for students from cluster 4 are

academic reputation (96%), knowledge of current faculty (83%), and family consideration (78%).

Academic reputation is a common reason for choosing the school among all cluster groups; however, the remaining two reasons vary greatly. For cluster 1 students, cost and employment prospects are very important reasons; these are still important for students from clusters 2 and 3. However, for students from cluster 4, the most important aspect is how much they will get to learn in this school, and their family's consideration plays an important part in this decision. Although, clusters 2 and 3 have similar top three reasons for choosing the school of architecture, for cluster 3 students family consideration is also important, although not in the top 3 it is very close to the cost that is in 3rd position. This makes sense because cluster 3 students have a high parent education level as compared to cluster 2.

8.3.3 Role of secondary education

Secondary education in Pakistan is explained in chapter 5 under section 5.5. Though early education is socially stratified in Pakistan (section 5.4), this stratification is much subtle and integrated into society. However, different types of secondary educations and their relevance to the social class make the investigation of its role much clearer. To understand this role in defining the learning experiences of students with different cultural capitals, students were asked how useful they have found their secondary education for learning architecture. The investigation was conducted through cross-tabulation between the cultural capital clusters and the usefulness of secondary education. The result of the chi-square test shows statistically significant evidence of very strong association ($p < 0.01$) and 0 (0.0%) cells have an expected count less than 5, so the null hypothesis is rejected. Table 8.12 shows the result of cross-tabulation, to make the results more comprehensible positive and negative responses are added and shown in the form of bar charts (Figure 8-6). Results show a great variety of responses among cultural capital clusters. A maximum number of students from cluster 1 (74.8%) responded that they had found early education slightly or not useful. Cluster 4 response is quite different, where almost half of the students said that they had found early education very or moderately useful. Students Responses from cultural capital cluster 2 and

3 lies in the range between clusters 1 and 4. Cluster 2 students show a little more positive response to the usefulness of early education as compare to cluster 3.

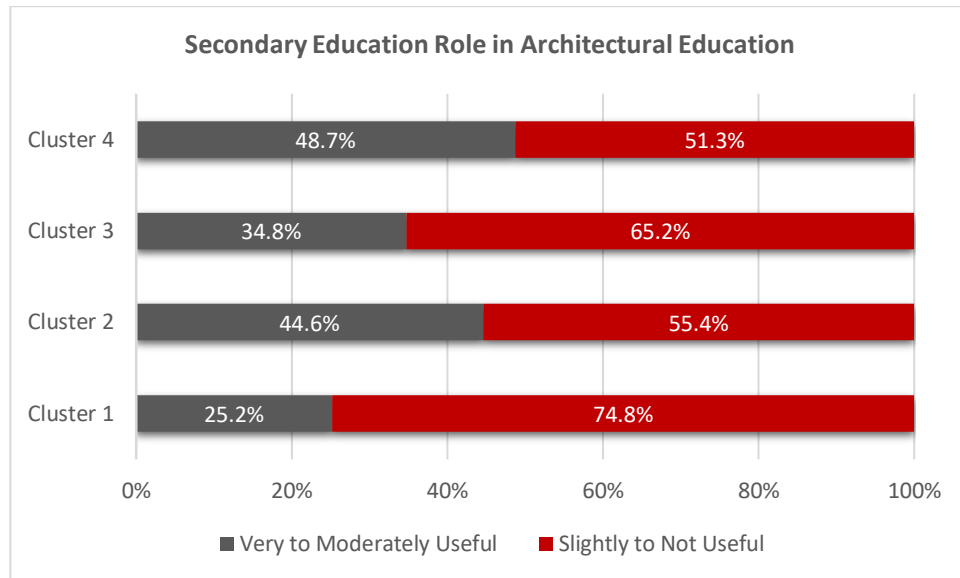


Figure 8-6: Students response to the role of secondary education

Another way of observing the contrasting results of clusters 1 and 4 is through the count and expected count in Table 8.12. For cluster 4, the count of “very useful” is significantly high than the expected count, and for cluster 1 it is significantly low. This shows that for cluster 4, the usefulness of early education is much higher than expected in overall data, and for cluster 1 it is much lower. The situation becomes reverse for the count and expected count of “not useful”. The reason for these variations is investigated by asking students which secondary education they had before coming to the school of architecture. The response is cross-tabulated with cultural capital clusters, the chi-square result showed statistically significant evidence of very strong association ($p < 0.01$), 0 (0.0%) cells have expected count less than 5, so the null hypothesis is rejected.

The cross-tabulation table (Table 8.13) shows the responses from different clusters of cultural capital. FA/FSc that is the Pakistani public sector secondary education system is most popular for all clusters of cultural capital. However, the popularity of O & A levels education system varies a lot with the cultural capital cluster. Many students from cultural capital cluster 4 had O & A levels education system before entering in the school of architecture, whereas only 4.2% of students from cluster 1 had this type of education.

Clusters * knowledge gained in early education Cross-tabulation							
			Very Useful	Moderately Useful	Slightly Useful	Not Useful	Total
Clusters	4	Count	115	135	154	109	513
		Expected Count	87.6	112.6	157.8	155.1	513.0
		% Within Clusters	22.4%	26.3%	30.0%	21.2%	100.0%
	3	Count	28	45	69	68	210
		Expected Count	35.8	46.1	64.6	63.5	210.0
		% Within Clusters	13.3%	21.4%	32.9%	32.4%	100.0%
	2	Count	50	49	61	62	222
		Expected Count	37.9	48.7	68.3	67.1	222.0
		% Within Clusters	22.5%	22.1%	27.5%	27.9%	100.0%
	1	Count	34	63	125	163	385
		Expected Count	65.7	84.5	118.4	116.4	385.0
		% Within Clusters	8.8%	16.4%	32.5%	42.3%	100.0%
Total	Count	227	292	409	402	1330	
	Expected Count	227.0	292.0	409.0	402.0	1330.0	
	% Within Clusters	17.1%	22.0%	30.8%	30.2%	100.0%	

Table 8.12: Crosstabulation Result for students' response on the usefulness of knowledge gained in early education.

Cultural Capital Clusters -Cross-tabulation- Secondary education				
	FA/FSc	DAE	O & A levels	Total
Cluster 4	316	9	185	513
	61.6%	1.8%	36.1%	100.0%
Cluster 3	175	5	29	210
	83.3%	2.4%	13.8%	100.0%
Cluster 2	174	11	37	222
	78.4%	5.0%	16.7%	100.0%
Cluster 1	341	28	16	385
	88.6%	7.3%	4.2%	100.0%
Total	1006	53	267	1330
	75.6%	16.4%	20.1%	100.0%

Table 8.13: Percentage of Cultural Capital students in different types of secondary education

Diploma of Associate Engineering or DAE is not a very common type of secondary education, but many parents who want their kids to start earning early prefer it, as explained in chapter 5 (section 5.5). This form of education is mostly taken up by the students from cultural capital cluster 1.

A very important finding is observed after comparing the responses of the type of secondary education by different cultural capital clusters, and the usefulness of it. It becomes clear that a big majority of cultural capital cluster 1 students take Pakistani government-managed secondary education, and they think that this education is not helping them in advancing their education in architecture. Whereas a large number of students from cultural capital cluster 4 take international O & A levels secondary education, and they think that this education is useful in learning architecture. Experiences by students from cluster 2 and 3 are ranging in between these.

To draw a direct comparison between the type of early education and its usefulness of it, these two variables are cross-tabulated. The chi-square result shows statistically significant evidence of very strong association ($p < 0.01$) and 0 (0.0%) cells have expected counts less than 5, so the null hypothesis is rejected. Table 8.14 shows the cross-tabulation result; however, to make it more comprehensible, positive, and negative responses are added and shown in the form of a bar chart (Figure 8-7). This result clearly shows a large variation of the level of satisfaction for the three types of secondary education. For O and A levels, a big majority (75.3%) of students responded that this education is very or moderately useful for them in learning architecture. For Matric & FA/FSc almost similar majority students (72.3%) expressed that this education is not helpful for them in learning architecture. The interesting aspect is that the subjects taught in both systems are very similar; only the pedagogical methods vary, as explained in chapter 5. DAE is also identified by the majority of students (65.8%) to be helpful in learning architecture. However, it was explored that the usefulness of O & A levels and DAE is very different in nature, which will be explained in chapter 9 through students' interviews.

Secondary Education -Cross-tabulation- Usefulness of knowledge gained in early education					
	Very Useful	Moderately Useful	Slightly Useful	Not Useful	Total
O & A levels	105	96	44	22	267
	39.3%	36.0%	16.5%	8.2%	100.0%
DAE	24	11	14	3	52
	46.3%	22.2%	26.0%	5.5%	100.0%
FA/FSc	95	184	350	377	1006
	9.4%	18.3%	34.8%	37.5%	100.0%
Total	224	291	408	402	1330
	17.1%	22.0%	30.8%	30.2%	100.0%

Table 8.14: Usefulness of different types of secondary education

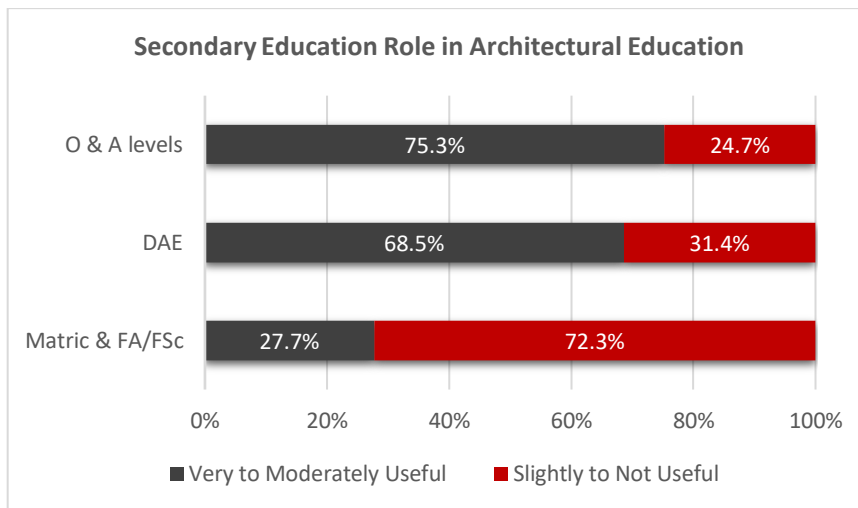


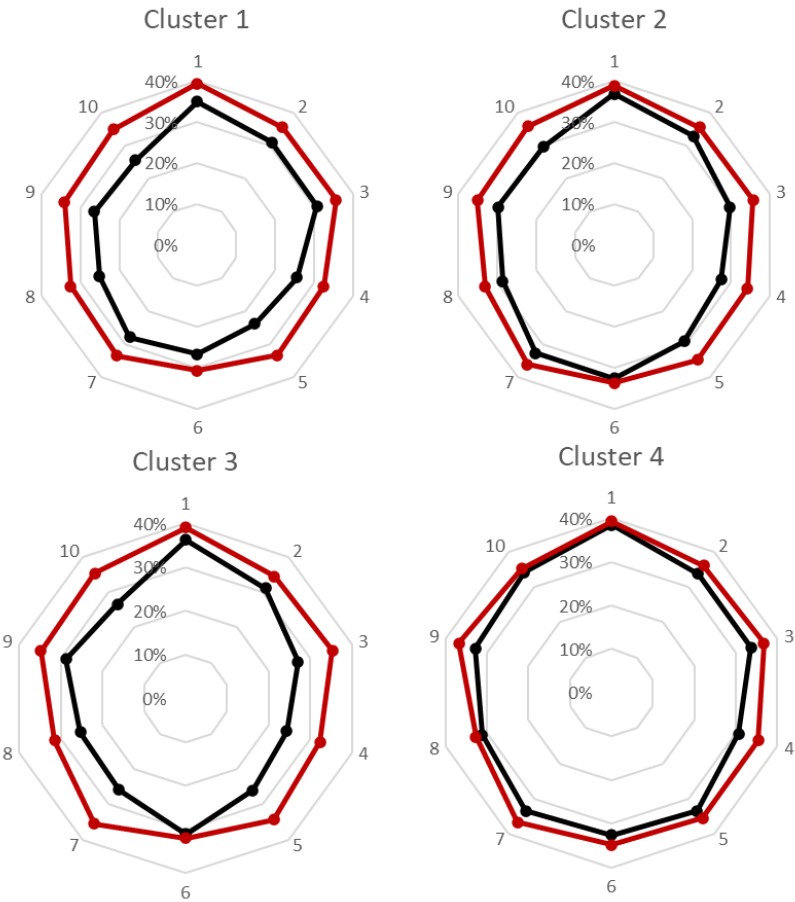
Figure 8-7: Role of Secondary education

8.3.4 Experience of taught and hidden curriculum

Students' perception of taught and hidden curriculum among different university groups helped to understand the institutional habitus of these university groups as discussed in chapter 7. However, to understand the impact of cultural capital on students' learning experiences, it is important to explore how students with different cultural capital experience the taught and hidden curriculum. To understand this, cultural capital clusters were cross-tabulated with all the questions for taught and hidden curriculum. All these cross-tabulations show a statistically very significant association in chi-square results ($p < 0.01$) and 0 (0.0%) cells have an expected count of less than 5, so the null hypothesis is rejected in all cases.

Taught Curriculum

For the taught curriculum, the cross-tabulation results are averaged based upon the Likert scale positioning of the answers, as explained in section 7.8.1 while exploring the taught curriculum in relation to university groups. If the average score is near 40%, more students agree with the statement and if it is closer to 10%, more students disagree with the statement in the results. Also, the results are used to draw a comparison between students from different cultural capital groups. For all cross-tabulation results, averaged scores for responses to the taught curriculum are shown through radar charts.



1=Design, 2= Manual Presentation skills, 3= Computer Aided Presentation Skills, 4= Urban Design, 5= Landscape Design, 6= Architectural History, 7= Structure and Construction, 8= Interior Design, 9= Environmental Responsive Design, 10= Architectural Practice
● Students' perception of the emphasis on different curriculum areas by the school
● Students' perception of importance of different curriculum areas

Figure 8-8: Cultural Capital Clusters mean responses to Taught Curriculum

Figure 8.8 shows students' responses to the taught curriculum across different cultural capital clusters. This figure is based on the result of cross-tabulation between cultural capital clusters and subject areas. Tables C-2 and C-3 in appendix C show the result of these cross-tabulations. To make it easier to understand and to compare the responses of each cultural capital cluster, responses of each cluster to different taught subject areas and their perceived importance is put together. Tables C-4 to C-7 in appendix C show these combined results and radar charts in Figure 8.8 are directly based on these tables.

These radar charts represent students' satisfaction with the taught curriculum in the form of how much importance is given to a particular subject area, and how much importance they believe should have been given to that subject area. The closer is the lines, the more satisfied students are with the taught curriculum in the school. As it is clear from the charts all cultural capital students believe that design studio is the most emphasised subject in the school, and they all agree with it as well. For other subject areas, students from clusters 1, 2, and 3 show almost the same level of satisfaction. However, students from cluster 4 show more satisfaction with the taught curriculum as compared to other groups, as the two lines are much closer in this radar chart.

Hidden Curriculum

The questions of hidden curriculum are based on the experience with different aspects of architectural education in the school, including school being a conducive environment, critiques being respectful, instructors accepting diverse thinking, support from the administrative staff, Positive communication with the program director, and faculty's ability to provide inspiration. Figure 8.9 shows different cultural capital students' responses to these aspects in the form of bar charts. These charts are created from cross-tabulation tables, students' answers are on a 4-point Likert scale as identified before, with the first two points identifying the negative (Strongly/slightly disagree), and the last two points identifying the positive responses (slightly/strongly agree). Bar charts are showing these negative and positive responses by adding the percentages for simplicity and easy understanding. full cross-tabulation tables can be seen in the appendices (see appendix C, tables C-8 to C-13)



Figure 8-9: Cultural capital clusters' response to different aspects of the hidden curriculum

For all questions, students from cultural capital cluster 1 show the least positive response. Positive perception improves in the other 3 clusters; this improvement is quite significant for the first five questions. The least positive response by cluster 1 is given to the question

“critiques are respectful and constructive”. Also, this question shows the largest variation of response among the four groups, as students from cluster 4 show the most positive response to this question. This indicates that students’ cultural capital comes into play the most when they present in front of an audience. Or when having to communicate in general as shown in response to the question “positive communication with program director”. In this question again, students from cultural capital cluster 1 show the most negative response.

Questions “School is a conducive environment for new ideas” and “instructor accepts diverse thinking” show a similar range of responses, with students from cluster 1 showing the most negative, and from cluster 4 most positive responses. This result communicates that student’s cultural capital hugely impacts their perception of the learning environment and makes them believe that their ideas are welcomed or not. Also, it shows that students from cluster 4 feel their ideas are appreciated more than students from other clusters. The least variation among the four clusters is for the question “support from administrative staff”, showing that this aspect of hidden curriculum is not directly impacted by students’ cultural capital. “Faculty’s ability to provide inspiration”, also shows the minimum variation of responses indicating that teachers inspire students irrespective of their cultural capital.

The result of these six questions indicates students from cultural capital cluster 1 feel more than the rest of the clusters that their ideas are not appreciated in the school, critiques are not respectful, instructors don’t respect their opinions, the administrative staff is not very supportive, and they don’t have the chance to have positive communications with program directors.

8.3.5 Personal performance and satisfaction

The next seven questions from the survey questionnaire are focused on students’ perception of their performance in the school of architecture, and their satisfaction with it. Included questions are, satisfaction with performance in architecture, confidence at the beginning of a new project, willingness to try out new ideas, dependence on the guidance provided by the teachers, confidence in interacting with fellow students, comfort with working in the studio for long hours, and comfort with architecture as compared to the first year. Answers to these questions are cross-tabulated with cultural capital groups (Table 8.9). As a result of all these

cross-tabulations, chi-square results show 0 (0.0%) cells with an expected count less than 5; also, all the cross-tabulations show statistically very significant evidence of strong association ($p < 0.01$), so the null hypothesis is rejected in all cases.

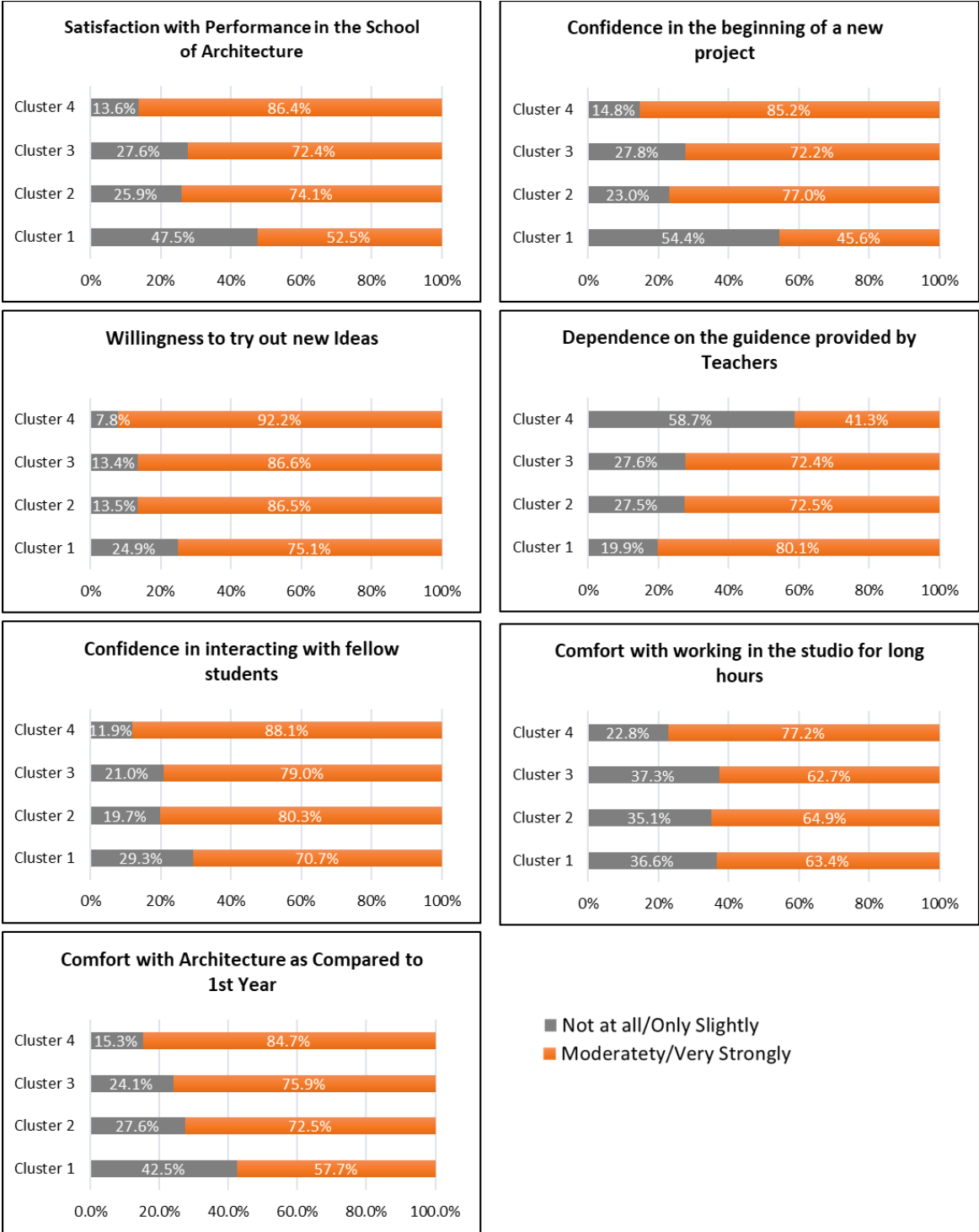


Figure 8-10: Cultural Capital Cluster' response to personal performance and satisfaction

Figure 8-10 shows different cultural capital students' responses in the form of bar charts. These charts are created from cross-tabulation tables, students' answers are on a 4-point Likert scale as explained before, with the first two points identifying the negative (Not at all/only slightly), and the last two points identifying the positive responses (Moderately/very strongly). Bar charts are showing these negative and positive responses by adding the percentages for simplicity and easy understanding; full cross-tabulation charts can be seen in the appendices (see appendix C, tables C-14 to C-20). For the question "comfort with architecture as compare to first-year" the responses of students from the first year are not included in the results.

It is evident from Figure 8-10 that students belonging to cultural capital cluster 1 gave a significantly negative response to all the questions in this category. These students show the most negative responses to six out of seven questions. These students show the least positive response to the question "confidence at the beginning of a new project", also this question shows the largest variation as cluster 4 students showed a very positive response to it. Other two question showing the largest variation with the most negative response from cluster 1 students is "satisfaction with performance in architecture" and "comfort with architecture as compare to the first year".

Response to these three questions indicates that students with low cultural capital are not happy with their performance in the school of architecture. They feel least confident in the school and the time spent here contributes the least in improving their experience as compared to other cultural capital cluster students. Also, the percentages in Figure 8-10 show that these students are most dependent on the guidance provided by the teachers. However, these students' positive responses to "willingness to try out new ideas" and "Comfort with working in the studio for long hours" show their willingness for hard work.

Verbal Presentation skills and English Language

Students were asked about the importance of verbal presentation skills in architectural learning, and the response was similar by all cultural capital groups, as they all equally agreed that it is very important. Around 95% of students from each group somewhat or strongly

agreed on it (*Table 8.15*). Also, as it can be seen from *Table 8.15*, there is almost no difference in the expected and observed count for students' responses from all clusters of cultural capital. This clarifies that the importance of presentation skills is independent of cultural capital and all students say that it is important no matter from which cluster they are.

Cultural capital Clusters * Cross-tabulation* Importance of Verbal presentation skills						
		Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree	Total
Custer 4	Count	2	12	105	394	513
	Expected Count	5.4	15.5	125.5	366.6	513.0
	% Within Clusters	0.4%	2.3%	20.5%	76.8%	100.0%
Cluster 3	Count	2	5	55	147	209
	Expected Count	2.2	6.3	51.1	149.4	209.0
	% Within Clusters	1.0%	2.4%	26.3%	70.3%	100.0%
Cluster 2	Count	0	8	65	149	222
	Expected Count	2.3	6.7	54.3	158.6	222.0
	% Within Clusters	0.0%	3.6%	29.3%	67.1%	100.0%
Cluster 1	Count	10	15	100	259	384
	Expected Count	4.0	11.6	94.0	274.4	384.0
	% Within Clusters	2.6%	3.9%	26.0%	67.4%	100.0%
Total	Count	1014	40	325	949	1328
	Expected Count	14.0	40.0	325.0	949.0	1328.0
	% Within Clusters	1.1%	3.0%	24.5%	71.5%	100.0%

Table 8.15: Different cultural capital students' response to the importance of Verbal Presentation skills in Architecture learning

Next, they were asked a more specific question, that is how they rank their own communication skills in English (*Table 8.16*), as English is the official language for universities in Pakistan. 78% of students from cultural capital cluster 1 responded that according to them, their communication skills are average or below average, meaning they are not very satisfied with their verbal presentation skills. Around 75% of cluster 4 students believe that their

English communication skills are excellent or above average, meaning they are very satisfied with their verbal presentation skills. And predictably cluster 3 and 4 students, the largest chunk of response is in above average to average that is 80 and 82% respectively, showing a reasonably good level of satisfaction.

Cultural Capital Clusters * Crosstabulation* Communication Skills in English						
		Excellent	Above Average	Average	Below Average	Total
Cluster 4	Count	156	230	115	11	512
	Expected Count	89.2	167.2	209.7	45.9	512.0
	% Within Clusters	30.5%	44.9%	22.5%	2.1%	100.0%
Cluster 3	Count	19	65	107	19	210
	Expected Count	36.6	68.6	86.0	18.8	210.0
	% Within Clusters	9.0%	31.0%	51.0%	9.0%	100.0%
Cluster 2	Count	31	77	101	11	220
	Expected Count	38.3	71.8	90.1	19.7	220.0
	% Within Clusters	14.1%	35.0%	45.9%	5.0%	100.0%
Cluster 1	Count	25	61	220	78	384
	Expected Count	66.9	125.4	157.2	34.5	384.0
	% Within Clusters	6.5%	15.9%	57.3%	20.3%	100.0%
Total	Count	231	433	543	119	1326
	Expected Count	231.0	433.0	543.0	119.0	1326.0
	% Within Clusters	17.4%	32.7%	41.0%	9.0%	100.0%

Table 8.16: Different cultural capital students' response to their communication skills

Another way of analysing the relation of students' cultural capital with their perception of communication skills is the difference of expected and observed count showing that the two variables are dependent upon each other. If the expected and observed count are the same, this shows that the two variables are not dependent upon each other, which is clearly not the case here. Also, for cluster 4 students, the observed count for excellent English communication skills is much higher than the expected count, indicating that these students

are doing much better than expected in overall data. Similarly, their observed count is much less than the expected count for below-average communication skills, communicating the same message. This situation is entirely reverse for cultural capital cluster 1 students.

8.4 Learning experiences in relation to institutional habitus

An important finding from students' responses to taught and hidden curriculum, and personal performance is that the responses of students from clusters 2 and 3 are very similar. The results are almost identical or show very small variations. For this reason, when investigating the role of cultural capital in relation to institutional habitus instead of the cultural capital solution of four clusters (Table 8.8), the three-group solution of high, middle, and low cultural capital is used (Table 8.9). The position of students from these three groups is now explored in the four university groups, formed based on institutional habitus (chapter 7). This will inform how students' cultural capital plays a role in relation to the institutional habitus of the school they study in, that defines their learning experiences.

		University Groups				
		Private Est. (A)	Private Emer. (B)	Public Art (C)	Public (D)	Eng.
Cultural Capital	Low	57	94	61	173	
	Middle	130	81	79	142	
	High	240	57	118	98	

Table 8.17: Students' Positions and the number of respondents for each position

Table 8.17 shows the number of students in each subgroup of cultural capital in university groups. This newly created variable identifying both students' cultural capital and their university group membership is named "Students' positions".

The next step is to investigate how the responses of the students from the same cultural capital group change across different university groups. And for it, the variable "students' positions" is cross-tabulated with all 13 questions of the hidden curriculum and personal performance and satisfaction. The Chi-square result of all these cross-tabulations shows statistically very significant evidence of strong association ($p < 0.01$), so the null hypothesis is rejected in all cases. The results of these cross-tabulations are explained by adding the two negative and two positive responses of the 4-point Likert scale and represented in the form

of bar charts. This addition makes it possible to understand the large complex data; full cross-tabulation tables can be seen in the appendix. Table 8.18 provides the key to understand Figure 8-11 to Figure 8-23; cultural capital groups are identified through three colours, while shades of these colours represent the negative and positive answers. Lighter shades of the colours on the left side of the bars show the added percentages of strongly disagree to somewhat disagree, and the darker shades on the right side of the bar show the added percentages of somewhat agree to strongly agree.







Cultural Capital Groups	Strongly Disagree/ Somewhat Disagree	Somewhat Agree/Strongly Agree
High		
Middle		
Low		

Table 8.18: Key to understand Figures 8.11 to 8.23

Results of analysis are discussed individually for all 13 questions starting from the first 6 questions of the hidden curriculum. For the first question “school is a conducive environment for new ideas” the lower cultural capital group shows the maximum variation in different university groups (Figure 8-11 based on Table C-21 in appendix C). Moreover, in the private emerging university group, the number of students agreeing with school being a conducive environment reduce significantly with higher to lower cultural capital groups. These two observations indicate that students with low cultural capital feel that their ideas are not appreciated in the school, and this discrimination is experienced the most by the students in the private emerging university group.

For the second question “critiques are respectful and constructive” high cultural capital students agree most with the statement in all university groups (Figure 8-12 based on Table C-22 in appendix C). And low cultural capital students agree the least, but within them, the most negative response is from the public art university group. Also, in this university group, the variation of response from high to lower cultural capital is quite high. This indicates that in public art university group students experience more discrimination based upon their cultural capital during critiques.

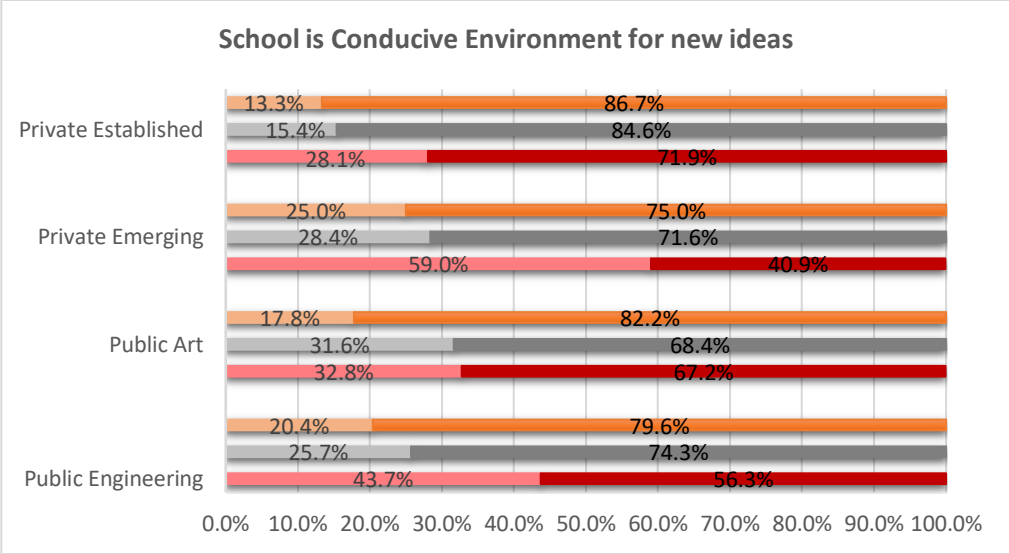


Figure 8-11: Crosstabulation result of Students' positions and school is a conducive environment for new ideas.

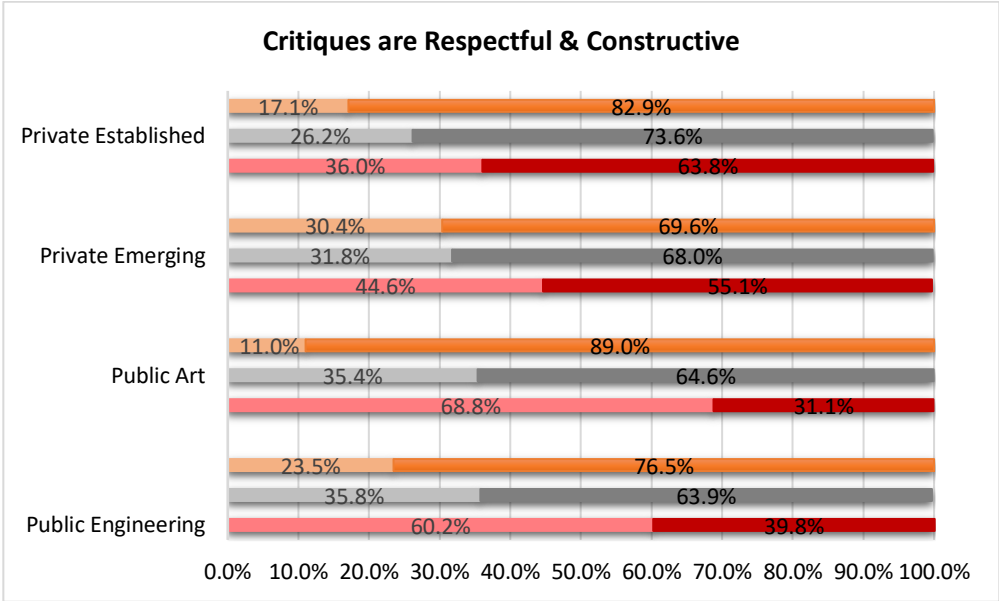


Figure 8-12: Crosstabulation result of Students' positions and Critiques are respectful

For the third question “instructor accept diverse thinking” low cultural capital students have the least positive response in all university groups, indicating that students believe teachers do not respect their thinking (Figure 8-13 based on Table C-23 in appendix C). However, among the low cultural capital group, the positive response by students is highest in public art schools. This is interesting because their positive response is also high for 1st question “school is a conducive environment for new ideas” but the lowest for 2nd question “critiques being respectful”. This indicates that in normal teaching activities, public art schools are

inclusive of the opinions of low cultural capital students, but in critiques, these students feel most victimised.

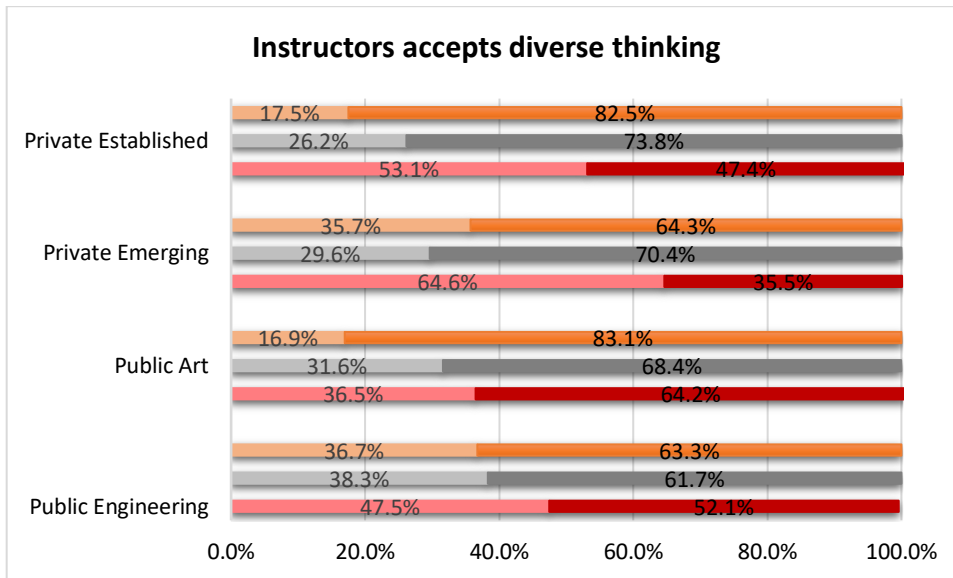


Figure 8-13: Crosstabulation result of Students' positions and instructors accepts diverse thinking

For the fourth question “support from administrative staff” there is not a lot of variation in cultural capital groups within 1 university group, except at the public art university group (Figure 8-14 based on Table C-24 in appendix C). However, there are significant variations among different university groups, this indicates that support from administrative staff is defined by institutional habitus more than cultural capital.

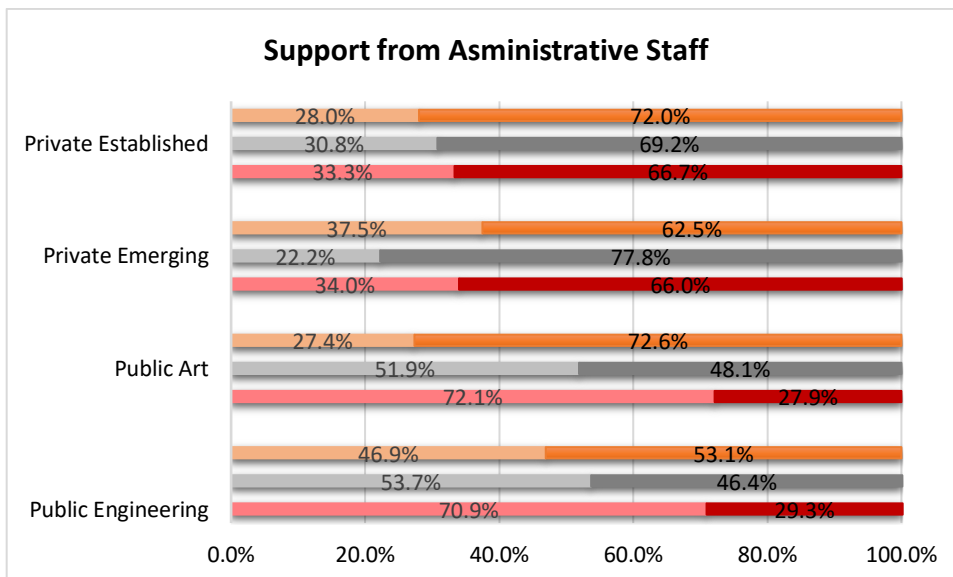


Figure 8-14: Crosstabulation result of Students' positions and support from administrative staff

For the fifth question “positive communication with program director” low cultural capital group students have the least positive response in all university groups. Also, in private established university groups there is a high variation among cultural capital groups (Figure 8-15 based on Table C-25 in appendix C). This indicates that in these schools, high cultural capital group students have more chances of communicating with authorities as compared to low cultural capital group students.

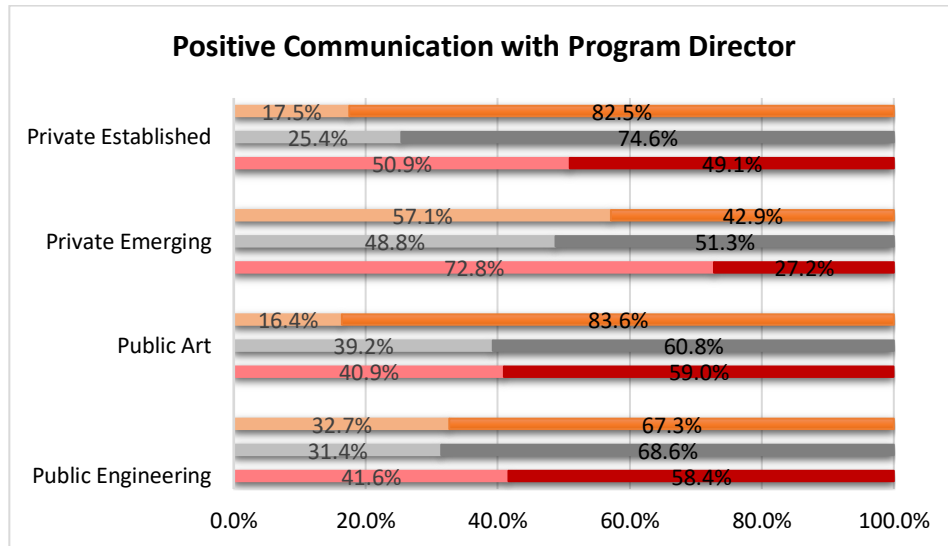


Figure 8-15: Crosstabulation result of students' positions and positive communication with the program director

For the sixth question “faculty’s ability to provide inspiration”, there is some variation among cultural capital groups but not communicating any significant results (Figure 8-16 based on Table C-26 in appendix C). Among different university groups, students from private established university groups show the most positive response, but the variation is not very large as compared to other university groups.

Figures 8.17 to 8.23 explain students’ responses to personal performance and satisfaction. For the first question “satisfaction with performance in the school”, cultural capital groups show maximum variations in private established university groups (Figure 8-17 based on Table C-27 in appendix C). This indicates that schools in the private established university group are creating an environment where high cultural capital students are most satisfied with their performance as compared to all other groups.

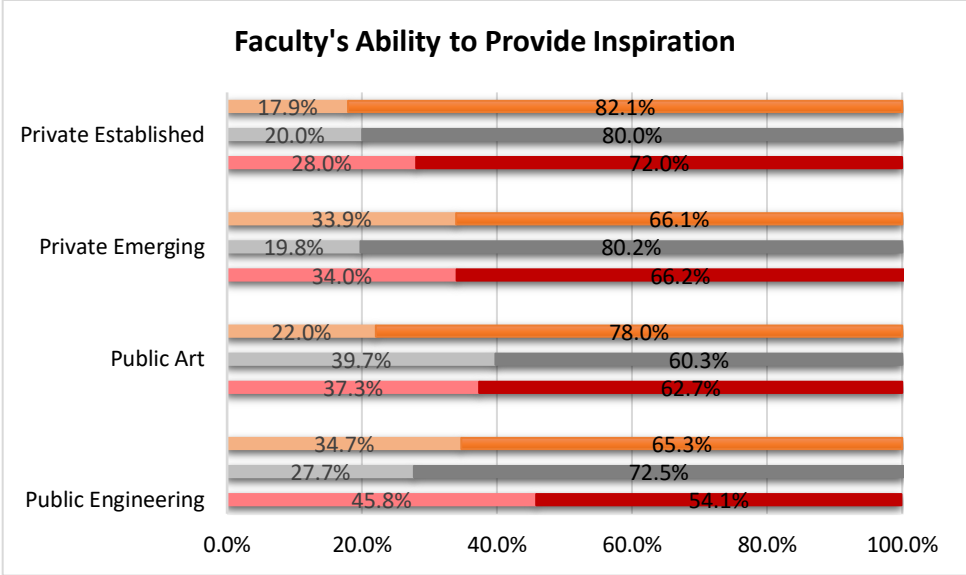


Figure 8-16: Crosstabulation result of students' positions and faculty ability to provide inspiration

For the second question “confidence at the beginning of a new project”, there is a great variation between responses from low, middle, and high cultural capital group students across all university groups (Figure 8-18 based on Table C-28 in appendix C). This is particularly evident in the private established and public art university group, where students’ response is very negative by low cultural capital group, confirming that these students do not feel confident in the learning environment of these schools. Low cultural capital students feel most confident about a new project in public engineering schools.

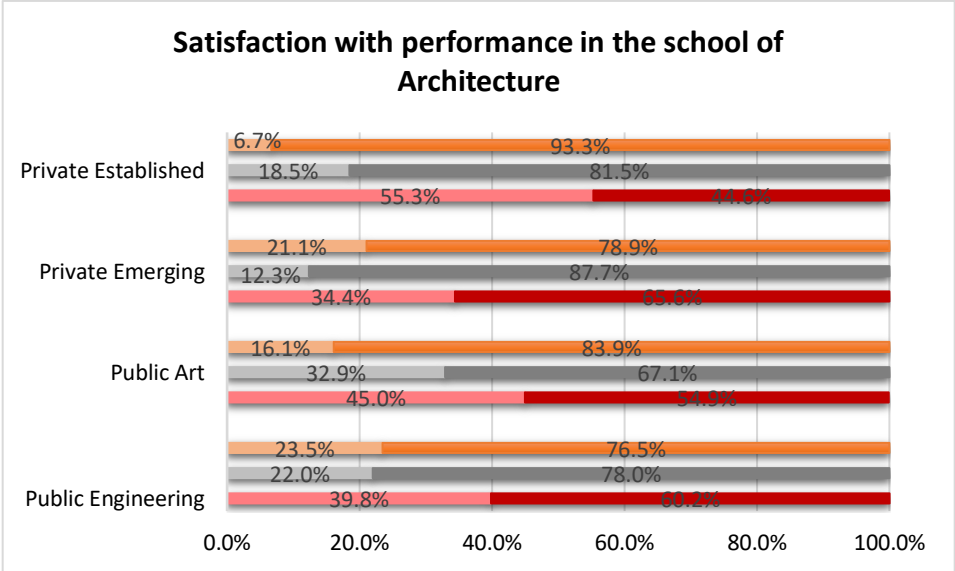


Figure 8-17: Crosstabulation result of Students' positions and satisfaction with performance

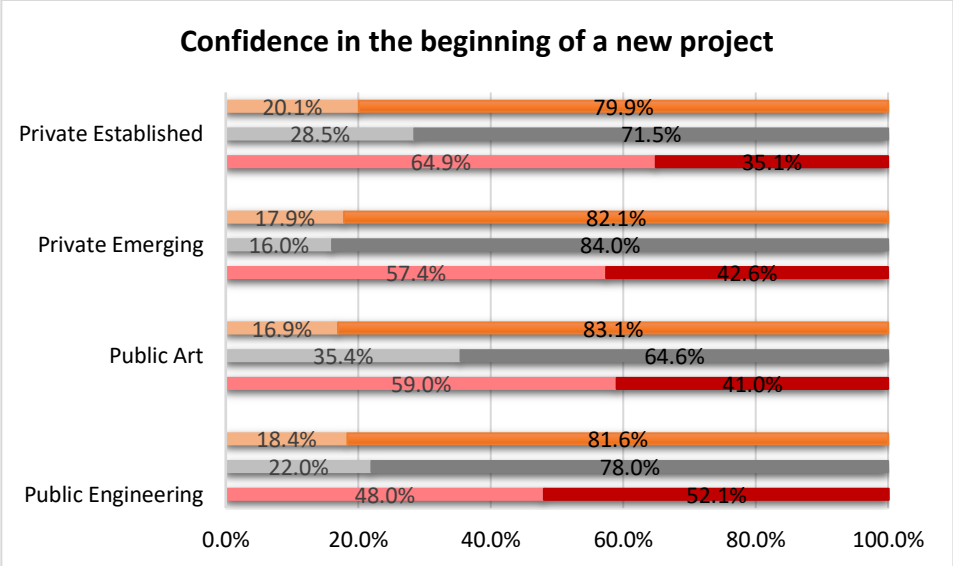


Figure 8-18: Crosstabulation result of Students' positions and confidence at the begging of a new project

For the third question “willingness to try out new ideas” there is a generally positive response by all cultural capital group students in all university groups. This shows that students are willing to try out new ideas irrespective of any factors. The most negative response, however, is by low cultural capital group students in the public art university group (Figure 8-19 based on Table C-29 in appendix C).

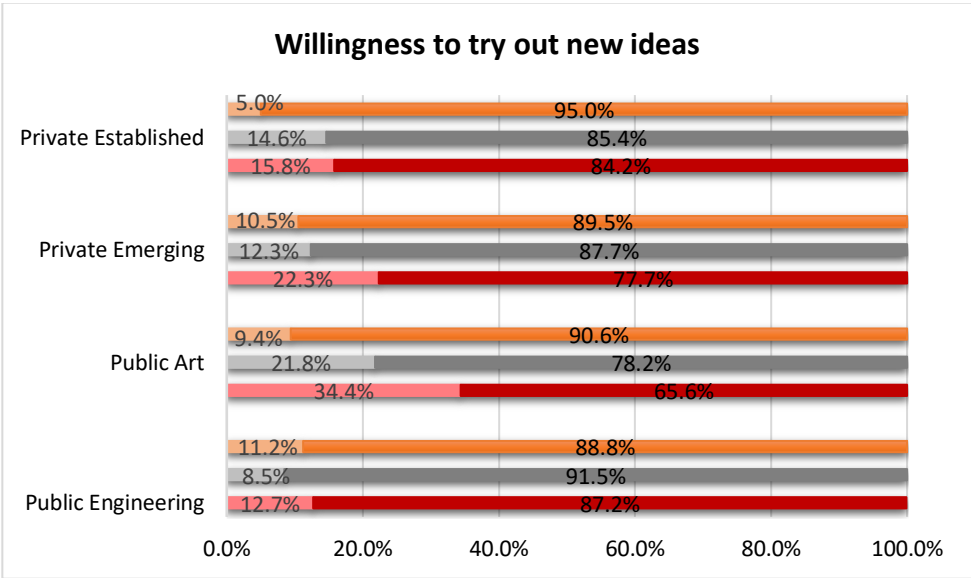


Figure 8-19: Crosstabulation result of Students' positions and willingness to try out new ideas

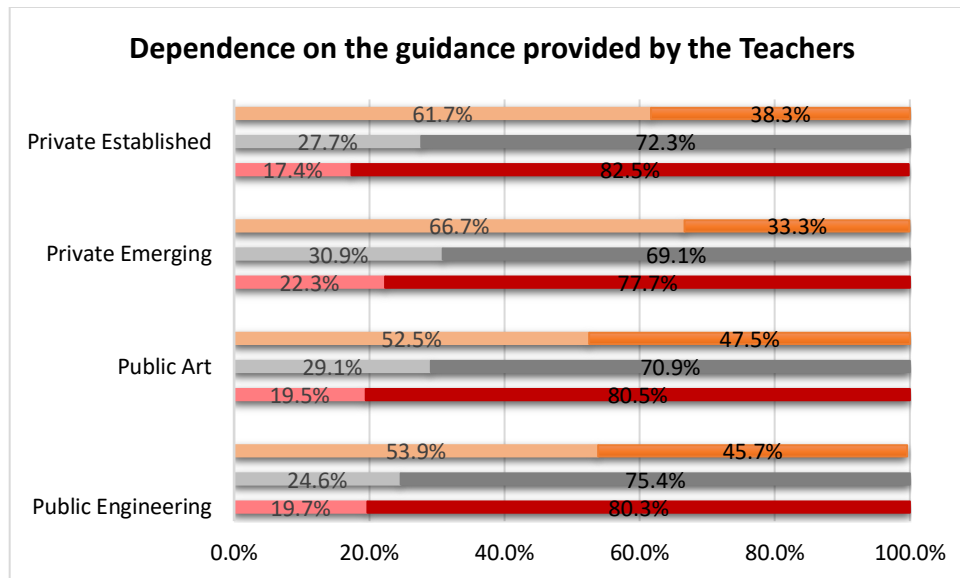


Figure 8-20: Crosstabulation result of Students' positions and dependence on the guidance

For the fourth question, "Dependence on the guidance provided by teachers" low cultural capital group students agreed the most to the statement in all university groups (Figure 8-20 based on Table C-30 in appendix C). Showing that they are most dependent on the guidance provided by teachers under all institutional habitus.

For the fifth question "confidence in interacting with fellow students", students' response from the low cultural capital group is negative for all university groups as compared to middle and high cultural capital group students (Figure 8-21 based on Table C-31 in appendix C). Their response is particularly very negative for the public art university group, indicating that in these schools high and middle cultural capital students are not very friendly with low cultural capital students.

For the sixth question "comfort with working in the studio for long hours", students' response is more dependent on university groups than cultural capital (Figure 8-22 based on Table C-32 in appendix C). Students' response is positive in private university groups and negative in public university groups. This makes sense as private university groups offer better infrastructure and working conditions in the studio as discussed in chapter 7 (section 7.5.3).

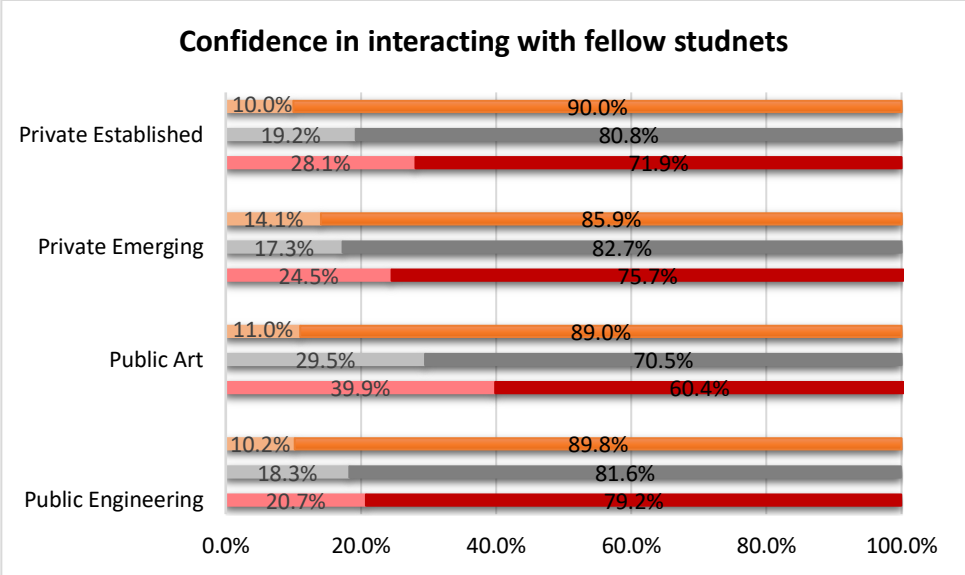


Figure 8-21: Crosstabulation result of Students' positions and confidence in interacting with fellow students

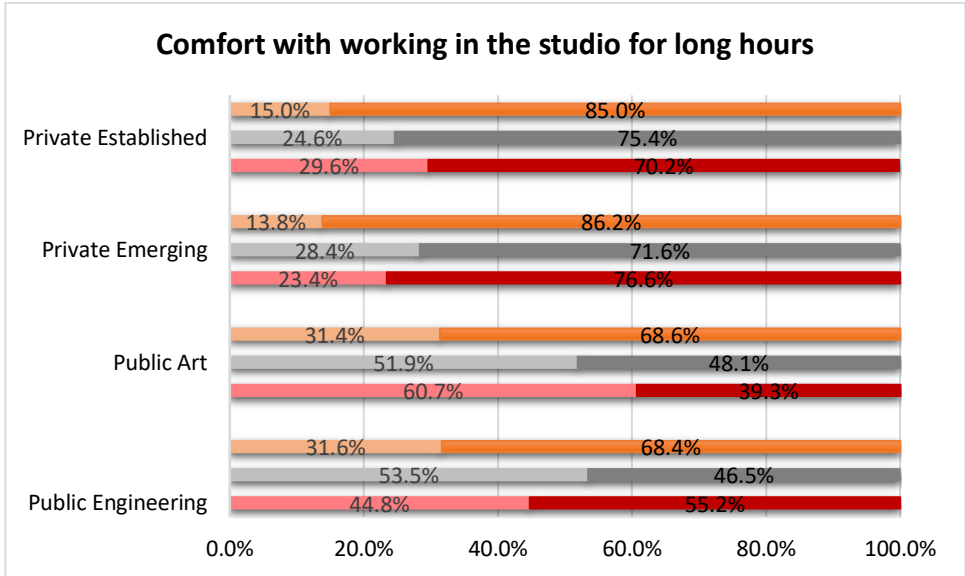


Figure 8-22: Crosstabulation result of Students' positions and comfort with working in the studio

For the seventh and final question “comfort with architecture as compare to first-year”, low cultural capital group students show the most negative response to the question for most university groups, which becomes positive from the middle to high cultural capital groups. This indicates that comfort with learning architecture is very much dependent on the cultural capital group (Figure 8-23 based on Table C-33 in appendix C).

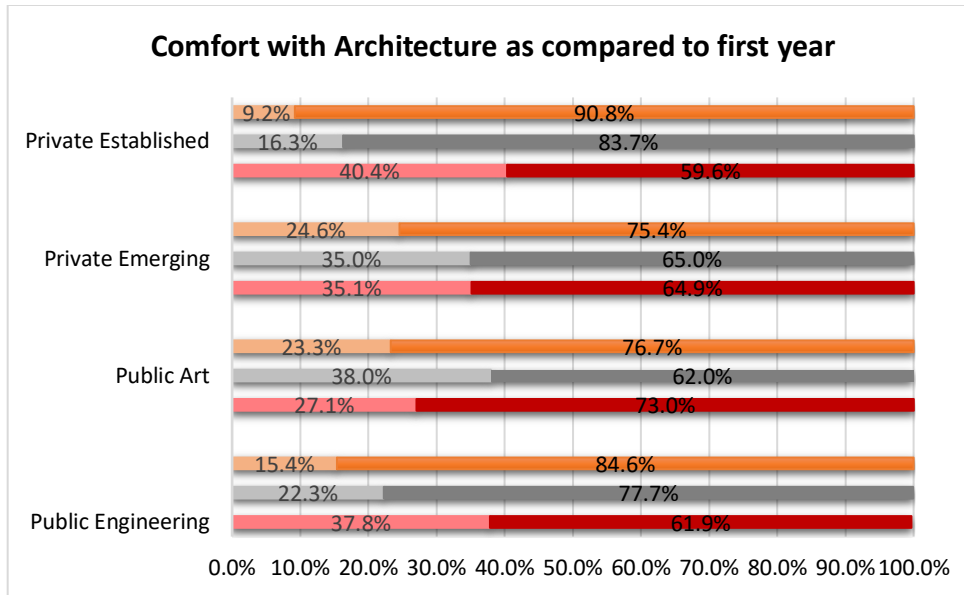


Figure 8-23: Crosstabulation result of Students' positions and comfort with architecture

8.5 Discussion

As discussed earlier (section 8.2) the “variables mother and father education” possess the highest communality value (Table 8.3), and among these mother’s education possesses the highest value. So, parents’ education is the most important factor shaping up students’ cultural capital. This finding is in line with Bourdieu’s (1973) identification of the importance of parents’ education in passing on the cultural credentials to the next generation. However, the exploration that among parents, mothers’ education has a more direct effect on students’ cultural capital is a new finding. Other than a direct impact on cultural capital, parents’ impact on students’ career choice is evident in the reasons for choosing architecture as a profession, where irrespective of the cultural capital cluster, parents’ advice is identified as the second most important reason for choosing this profession.

Parents’ advice has a different impact on the choice of school for different cultural capital students. As students from cultural capital clusters 2, 3, and 4 identified parents’ advice among the top three reasons for choosing a particular school of architecture. However, cultural capital cluster 1 students did not have this reason among the top 3. As it is clear from the method of categorising students into different cultural capital clusters that parents of cluster 1 students are not well educated so it makes sense that they do not have an understanding and opinion for the schools of architecture. Also, it is clear from the results

that the largest majority of cluster 4 students enter architecture by being attracted to the profession. And the largest majority of cluster 1 students enter architecture by being assigned by the university and they do not have any understanding of the profession, this lack of understanding of profession automatically impacts the performance of these students at school.

Another factor affecting the performance of the students from low cultural capital is early education, as discussed earlier, O & A levels are found to be more helpful in learning architecture. But as it is a very expensive education, only a very small fraction of students from cluster 1 get this education in contrast to cluster 4 students. They are giving cluster 4 students a better chance to perform in the school of architecture.

Students' responses to various aspects of the taught curriculum show that students from distinct cultural capital clusters experience it differently. Cultural capital clusters 1, 2, and 3 students show a similar level of dissatisfaction with the taught curriculum, and the satisfaction level for students cluster 4 is much higher. This explains a mutual understanding between high cultural capital students and the schools. This is very much in line with Stevens (2002) idea of architectural schools treating high cultural capital students as part of the community.

Dutton (1991) claimed that architectural education has a strong hidden curriculum that socialises and acculturates students into the values and practices of the discipline, so it is important to understand how students with different cultural capital experience this hidden curriculum. As explained earlier in this chapter, for all aspects of hidden curriculum students from cultural capital cluster 4 gave the most positive response, which reduces from cluster 3 to 1. Among all the investigated aspects, Figure 8-24 exhibits the aspects of the hidden curriculum and personal performance that show the maximum variation of responses among cultural capital clusters. This figure shows only the sum of positive responses of students for a clear understanding. The variation of cultural capital groups is most evident in critiques, which is also identified in the literature as the single most important event in architectural learning (Webster 2005). It puts students' habitus most on display, and that is the reason students with low cultural capital find it the most difficult. English language skill is another aspect that dictates the success in critiques in the context of Pakistan. Urdu is the national

language of Pakistan, but English is the official language of education. Teachers do not require their students to speak in English all the time, but they are often impressed by the ones who can (Iqbal & Roberts, 2019). In this study, 78% of low cultural capital students responded that they are not satisfied with their English-speaking skills and 75% of high cultural capital students responded that they are satisfied with their English-speaking skills. This automatically transforms into good performance in critiques.

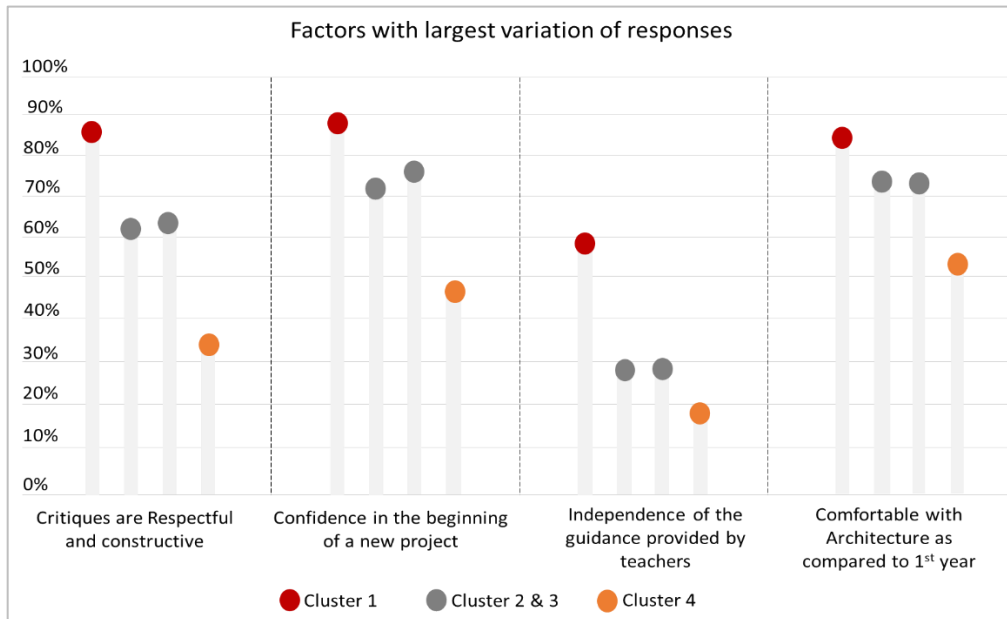


Figure 8-24: Variation of Responses from different clusters

The other factors showing most variation involve confidence at the beginning of a new project and in interacting with fellow students. Confidence while working on a project directly transforms into success; this is particularly important in the design studio because it is not based on completing the tasks given by teachers rather producing innovative designs. Cluster 1 students' low self-confidence at the beginning of the project is also shown in their relationship with teachers, as they reflected to be most dependent on the guidance provided by the teachers. Whereas, cluster 4 students reflected to be most independent of teachers' guidance.

Cultural capital 1 students' low response to comfort with architecture as compared to the first year shows a low level of transformation that is a necessary part of learning. As explained in the literature, architects think in a different manner than non-architects, and this particular

thinking develops during the period of training in architectural schools (Groat, 1982; Wilson, 1996). Bourdieu also explained that a person’s habitus change with the time spent in an educational environment. This chapter shows that students from cultural capital cluster 1 are most dependent on teachers’ guidance for this transformation, and students with high cultural capital have a much tranquil path for it as they easily become more comfortable with the requirements of the profession.

In the exploration of students’ responses to learning experiences in relation to institutional habitus, low cultural capital students show the maximum variation of responses across different university groups, indicating that these students are affected by institutional habitus the most. These students show the least positive response to almost all aspects of learning experiences, so, it is important to investigate how their responses vary among university groups. As it gives an insight into how the institutional habitus of different groups is treating the students with low cultural capital. Figure 8-25 shows the most obvious positive and negative responses by low cultural capital students in different university groups.

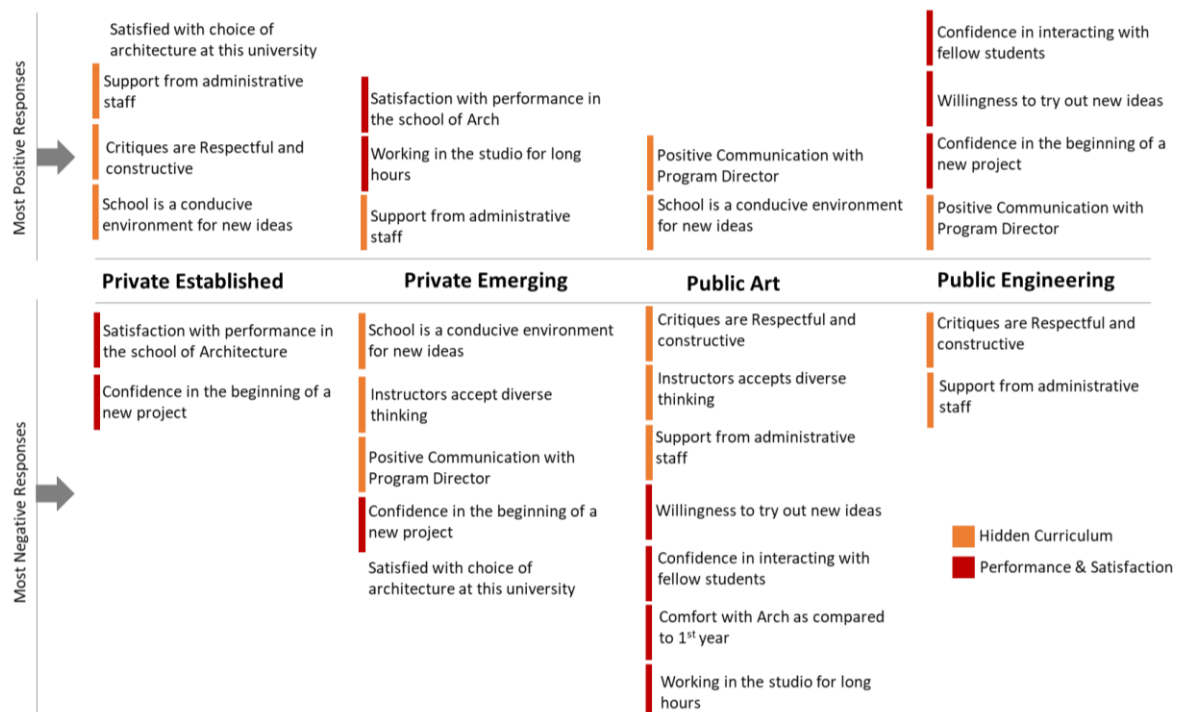


Figure 8-25: Low Cultural Capital Students’ most Negative and Positive responses across different university groups

Private established schools that are more focused on social inclusion and student grooming in their pedagogy as explained under institutional habitus (section 7.6) are generally performing better in terms of practicing a more inclusive hidden curriculum for lower cultural capital students. As low cultural capital students gave the most positive responses to different aspects of the hidden curriculum in this university group as compared to the other groups. However, these students are still most unsatisfied with their performance in this university group and feel most under-confident at the beginning of a new project. The reason for this is that these schools are very expensive, so the majority of students (56%) are from high social backgrounds containing high cultural capital as shown in Table 8.15. As a result, the few students with a low cultural capital (13%) in this university group feel like they do not fit in. This aspect is further investigated in the next chapter through students' interviews.

Private emerging schools perform better in terms of providing good infrastructure and support staff because by being part of the private establishment they have more money and resources. This is something this university group shares with the private established university group and both public university groups lack in it. But in contrast to private established university groups, they are not very focused on grooming individuals and social inclusion as depicted through their institutional habitus in the last chapter (section 7.6). And that is the reason students from the low cultural capital group do not feel they have a good connection with instructors and program directors. They also feel that school is not a conducive environment for new ideas.

The public art university group shows the most diverse range of responses. Low cultural capital students responded that these schools are providing a very conducive environment, and instructors accept diverse thinking. Also, from the institutional habitus, it is clear that these schools practice critical pedagogy (section 7.9). But at the same time, these schools are not socially inclusive when it comes to architectural review, as low cultural capital students gave the most negative response to critiques being respectful, also there is a large variation of response from low to high cultural capital students. Williams (2014) identified a design studio as a liminal space, holding the learner in a supportive, in-between state where learning resources can be directed to ideas that are difficult for students to grasp, and teachers need

to be sensitive to the needs of students for this space to work. These statistics identify that the institutional habitus of schools from public art university groups is failing to create such space and that is why students from the low cultural capital group are least willing to try out new ideas. They are also least comfortable with their progress in the school of architecture as compared to the first year. The reasons for contrasting responses by students in this university group are further explored in chapter 10 (section 10.3.3 Public display of habitus).

In public engineering university groups, low cultural students have the most positive response to their own performance in the school. Even though they think that critiques are not respectful, these students are most willing to try out new ideas, and they feel confident at the beginning of a project and in interacting with fellow students. Schools from this university group despite being heavily influenced by engineering culture are performing the best for motivating the students to confidently taking up new tasks in design, the reason for this is explored in chapter 10 (section 10.3.1 Access to architecture).

8.6 Summary and conclusion

Based on Figure 8-1, Table 8.19 provides a summary of all the actions taken in the chapter. Briefly put, there are three main actions,

1. Exploration of cultural capital (1st factor from the table).
2. Exploration of learning experiences for the cultural capital groups alone as well as in conjunction with institutional habitus university groups (2nd and 3rd factor).
3. Identifying the factors of learning experiences with the largest variation across cultural capital groups, or the factors impacting the learning experience the most (4th factor).

This chapter explains that cultural capital impacts the reasons students enter architecture and the experience they have in learning. High cultural capital students understand the profession before entering it, and they have an easier path to success. Institutional habitus also plays a major role in defining students learning experience, and schools that are more focused on individuals training are doing better in providing an inclusive learning environment. However, the lack of social diversity in these schools is still a problem that is translating into uncomfortable learning environments for students with low cultural

capital. Also, public engineering schools are found to be providing a good learning experience in terms of confidence and willingness to work.

Factors explored in the chapter.		Brief Summary
1	Exploration of cultural capital	Cultural capital categories are formed based on students' responses to involvement in cultural activities in their early lives, as well as their parent's education.
		Two types of solutions are created for cultural capital, the four-cluster solution (clusters 1,2,3, and 4) and the three-group solution (low, middle, high).
2	Exploration of learning experiences in relation to cultural capital clusters.	Variation in experiences of the taught and hidden curriculum by students of different cultural capital clusters, differences, and similarities are discussed.
		Variation in experiences of performance and satisfaction with it by students of different cultural capital clusters, differences, and similarities are discussed.
3	Role of institutional habitus in learning experiences.	Variation of learning experiences by same cultural capital students is explored across the university groups with varied institutional habitus.
4	Variables from hidden curriculum and performance and satisfaction affecting the learning experiences the most.	Factors with the largest variation of responses by different cultural capital groups are explored.
		Low cultural capital students are affected the most by institutional habitus. Their most positive and most negative experiences across different groups of institutional habitus are explored.

Table 8.19: Summary of actions taken in the chapter

CHAPTER NINE

Investigating the Role of Habitus in Learning Approaches

9 Investigating the Role of Habitus in Learning Approaches

9.1 Introduction

In this chapter student's habitus is investigated and categorised in groups based on the data collected through qualitative interviews. Learning approaches of students from different habitus groups are also investigated independently and in relation to the groups of institutional habitus investigated in chapter 7. Figure 9-1 explains the relationship of all the concepts investigated in this chapter.

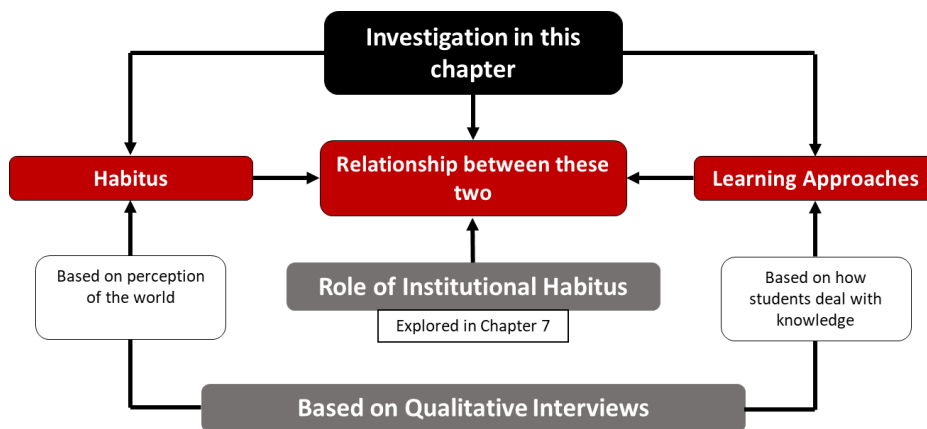


Figure 9-1: Different concepts investigated in the chapter and their relationship

9.2 Biases

Steering clear of the biases while conducting the interviews and analysing them has been an important concern for the current study. As Bourdieu mentioned through the concept of reflexivity that the researcher needs to be aware of their position in the field (Webb et al. 2002). Also, they should not let their understanding of the field determine their interpretation of the responses. The three forms of biases that could impact this study are scholastic bias, confirmation bias, and courtesy bias as explained in section 6.14.

The researcher of this study made sure to not cloud the findings through some measures at the data collection, processing, and analysis stage. First, she did not choose the students for interviews by herself nor even asked the teachers to choose the participants. Rather students were asked to participate on a voluntarily basis. This was to make sure only those students

come forward who feel free to speak their mind, rather than feel obligated to protect their institute's image. Second, during the transcription process, while translating the sentences from Urdu to English, she tried to be very careful to use the right language and appropriate words to keep the meanings of the sentences intact. Third, while analysing and describing the meaning of students' responses, she made sure to understand the actual meanings behind the conversation and use them for discussing the emerging themes in data both for the inquiry of habitus and learning approaches. Also, she asked a colleague to peer review the data and coding process. A combination of open, inductive, and deductive coding is used to make sure that any biases can be removed from the coding process. This coding process is explained in detail in sections 9.6 and 9.8.

9.3 Details about interviews

As suggested in the literature, habitus and learning approaches in this study are investigated through semi-structured interviews exploring life history. These interviews are conducted with 44 students in 13 architecture schools in Pakistan; all students belong to the third year of study. The selection criterion for interviews on voluntarily based as mentioned before, students of the third year were asked if they will like to participate in an interview and a brief description of the interview content was provided, then volunteers were selected for interviewing in each school. At the beginning of the interviews, students were given the consent forms to be signed, and the interview recording arrangements were explained to them. Each interview lasted from 40 to 60 minutes. In the previous chapters, Table 6.5 identified the number of interviews from each school involved in the study, and Table 7.5 identifies the number of interviews from different university groups. Justification for the number of interviews in each university group is provided in section 7.6.

Interviews were conducted in two mixed languages, one is the national language of Pakistan Urdu, and the other is English. English is considered the most prestigious language in the academic environment of Pakistan, as discussed before in chapter 5 (section 5.4), and that is why students who are comfortable in English prefer to speak it. However, students who are not comfortable in speaking complete sentences in English still use a lot of English words in their sentences. A typical way of communication is that all the main words are spoken in

English and the joining words are spoken in Urdu. That is why the mixed language interviews did not lose their meaning in translation.

As these are semi-structured interviews, there was no pattern of questions asked and discussed during the interviews. However, there were some essential points discussed in all interviews; these points are focused on exploring three aspects. First is their perception of the school of architecture they are studying in, understanding the institutional habitus. Second is students' life history to understand their habitus, and third is the way they deal with learning in the school of architecture, to understand their learning approaches. The institutional habitus based on the first aspect is explored in the 7th chapter; the second and third aspects are explored in this chapter.

9.4 Habitus Investigation in literature

The concept of habitus is widely used in literature to investigate the role of social background. However, as discussed in chapter 6 (section 6.11.1), Reay (2004) has warned against the superficial use of the concept. This means habitus should not be used just to analyse and make sense of data; instead, it should be used as the conceptual and methodological base for the investigations embedded in the questions, objectives, data collection, and analysis. Reay (2004) mentioned that a significant amount of literature uses the concept of habitus as a reference, and it is assumed rather than investigated. Instead, use of all of Bourdieu's concepts should be done in three stages as mentioned by Harker et al. (1990), that is theory, empirical research, and redeveloping theory but at a different level.

The detailed analysis of literature on investigating habitus in chapter 6 (section 6.11.1) concluded that semi-structured interviews exploring life history are the most appropriate method for the investigation of habitus in the current study. Moreover, Evans (2016) explained that a researcher investigating habitus needs to think about the description, which means being careful not to reduce the narrations of stories for scientific analysis. Instead, he recommended capturing the essence of individuals' habitus in the depth of the narrations of their lives.

Interviews were coded using NVivo 12 to explore the emerging themes for habitus investigation. As mentioned before, there was no pattern to questions asked, so the coding

process was very complicated. Open coding is used is recommended if there are no prior assumptions for the findings (Blair, 2015). Since there was no prior assumption about the students' habitus in the interviews, open coding was used. Once coding was completed, the codes were reviewed to explore any missing points, and most importantly, to identify and remove any biases. Codes were also peer-reviewed with the help of a colleague as mentioned before. During the coding process, the answers started repeating after 10-11 interviews indicating that saturation is achieved. Nevertheless, all 44 interviews were used in coding, as the purpose of coding is to create categories of habitus and observe the variation in responses across them. A large sum of interviews ensured that saturation can be achieved in the formed groups while observing responses for learning approaches. This is important as Marshall et al. (2013) identified that it is important to justify the number of interviews based on the research plan and objectives for the study at hand.

9.5 Role of cultural capital

The cultural capital of students was explored in chapter 8. As explained earlier in chapter 2 (section 2.10), habitus is often defined as embodied cultural capital, so the cultural capital of the interviewed students indicates their habitus as well. However, this indication needs to be taken very carefully, because there is a fundamental difference between habitus and cultural capital. Cultural capital is the familiarity with the dominant culture of society, so it indicates what a person possesses in terms of cultural value. However, habitus is much deeper, it is the inherited personality dispositions, and it goes beyond what a person has, to what they think of it. Also, this study is investigating the habitus of individuals already in higher education, which is considered an important factor transforming habitus. For this reason, cultural capital is not used as an indication of students' habitus in this study. However, a relationship between these two is explored in sections 9.6.6 and 10.2.

9.6 Investigation of habitus in this study

To explore students' habitus, five types of questions are explored in this study. These are, 1. students' early education, 2. role of parents' views in their lives, 3. hobbies and activities, 4. their world view, 5. and their perception of the professional life. These questions are discussed one by one here to categorise the range of answers and to explore students'

habitus. The three categories of habitus explored through this analysis are identified as cultivated habitus (the highest category), mezzo habitus (the middle category), and oblivious habitus (the lowest category). Habitus is described in literature through different terms. For example, Arnot & Naveed (2014) used the term “rural habitus” while explaining the differences in learning by members of rural and urban families. The term cultivated habitus is frequently used in the literature (Bourdieu, 2017), it represents a habitus that is developed through conscious learning and being aware of the world around. This term is used in the same meaning for this study. In contrast to this, the current study uses the term “oblivious habitus” to describe a habitus that is formed by the absence of conscious thinking, and by blindly following whatever circumstances life offered without questioning. “Mezzo habitus” in this study is used to describe a habitus that does not show clear signs of cultivated or oblivious habitus.

9.6.1 Early education

The first question is how much they got involved in art and culture activities in school, and the answers are ranging from every week to never. As different students explained in the interviews:

- *We used to have excellent art classes in school where I learned a lot about the basics of sketching and design (Student No. 9)*
- *In the primary classes, there used to be some art activities, we used to have some drawing classes. However, this did not continue in the senior classes, and the school’s focus was only on the book’s content. (Student No. 34)*
- *Not really, the school was only focused on completing the textbooks. (Student No. 14)*

The second question is based on how focused their schools were to develop critical thinking skills; answers are ranging from regular guidance and focus on thinking and writing skills, to personality development and reflection, to no focus at all. Students showed this range of responses in the interview:

- *The education was based on concept development, so somehow you start reasoning. We used to have many writing workshops as well (Student No. 18)*
- *My school was focused on personality development and confidence building. (Student No. 31)*
- *We were expected to learn by heart and remember whole books for one day of exams, and in exams, there are so much long subjective questions, only completing the exam*

in time is a race then how can a student learn and understand something. (Student No. 24)

The third question is the most important one in understanding students' habitus, it explores how satisfied students are with the art and cultural activities and critical skills they have developed in early schooling. This ranges from very satisfied to never thought about it; students who fall under the high category for art and cultural activities and are satisfied with it indicate cultivated habitus. However, students who did not have these activities in school, but are very unsatisfied about this, also possess cultivated habitus, showing that they realise the importance of these activities. Only the students who never thought about what they learned in early schooling and how it is contributing to their lives contain oblivious habitus.

The quotes below show this range of responses by the students.

- *I think my education of O and A levels has changed me completely, I mean if I compare myself with my class fellows who have done matric FSc, and they are always looking for exact answers. (Student No. 4)*
- *There were no proper art classes in my school, and that is something I always missed, I always wanted to have art competitions in the class, I even arranged a small-scale competition in my own class by asking for a free period from my teacher. (Student No. 15)*
- *I never thought about it; I used to be too much focused on studying and getting good marks. (Student No. 43)*

9.6.2 Impact of parents' views

The impact of parents' views on students' personality development was investigated through three questions. The First one is "parents' education and profession" ranging from high professional degree to working class. The second is "parents' views about education and personality development", its range is based on how much importance parents give to education, and what is the purpose of education in their opinion. This question is not only based on how much parents talk about education's importance but practically what they did for it. For example, students mentioned that parents have moved from a small town to a big city just for the sake of education, or dedicated a whole room for 1 child so that they can work efficiently despite not having enough rooms in the house. Parents who only want their kids to

have good professional degrees for the sake of getting a good job were not very supportive of architecture or any art education. Following students' quotes show the range of responses.

- *Yes, my parents take our education very seriously, we used to live in a village near Mianchanu where our lands are located. It was a big mansion for my grandparents' whole family but my parents moves to Mianchanu only for our education so that we can go to a decent school. (Student No. 2)*
- *They were not unhappy (with architecture), they just made sure I am making an informed decision. My father always encourages my fondness for art activities. (Student No. 33)*
- *My parents were just focused on the fact that I should get a good professional degree in whatever subject, so I can get a good job. They did not understand what I will be doing after architecture, so they were not very happy. (Student No. 39)*
- *I never discussed the importance of education with them. (Student No. 15)*

Parents who give a lot of importance to education based on its grooming and mentoring ability and not just for the sake of getting a job indicate possessing a cultivated habitus themselves, which is transferred to their offspring. The third question is based on how much importance is given to parents' guidance, with the answers ranging on how many times students mention their parents' views on education during the interviews. This information is not directly based on codes from the interview transcription; instead, it is an observation of the researcher from the interview. This information is directly based on interview recordings and transcriptions.

9.6.3 Hobbies and activities

Hobbies and free time activities are a significant indicator of one's habitus, as it shows what they like to do when not undertaking the defined tasks. It reveals their personality dispositions in the real sense and provides an insight into their life aspirations. In this study this is explored through four questions, the first question explores their general hobbies, ranging from developed skilled hobbies to believing that they never had time for any hobbies in life as they have been focused on study all the time. The following quotes show the range of responses by students.

- *I have many hobbies; I like to read a lot, I have an interest in photography, I used to paint up my till my college times, I used to be very active in sports in school times. (Student No. 1)*
- *You have to make time (for hobbies), sometimes you have to multitask, and sometimes you just have to priorities, if you want to do something you have to leave everything else to make time for it. (Student No. 10)*

- *I do not have any particular hobbies, maybe because I never had time to develop any. I like to spend time with my friends in my free time.*
- *During the semester there is hardly any free time for any hobbies, architecture keeps very busy. (Student No. 28)*
- *My parents always used to ask me to focus on my studies, so I never had time for any hobbies. (Student No. 13)*

The second type of question is based on their book reading habit, ranging from how often they mentioned the importance of books by themselves during the interview to only talking about it when asked and mentioning that they never had time to read books other than defined course books.

- *I liked reading a lot, both fictional and non-fictional. My favourite fictional book is Harry Potter, non-fictional books are many. I recently read the image of the city, and it has changed the way I see Lahore. (Student No. 7)*
- *I read a lot, all kinds of books fiction and non-fiction I just love to read. I read a lot of novels in my free time. (Student No. 18)*
- *I did not use to (read books), but now I do. I like to study books about architecture; I realise now that books help a lot in learning some new points. (Student No. 22)*
- *Not really. I do not like reading books; I only watch a few movies that are translated in Pushto. (Student No. 30)*

The third type of questions is based on their taste in music, ranging from having a defined taste, to listening to whatever pop music is famous nowadays.

- *I like listening to old classics, Nusrat Fateh (celebrated Pakistani classical singer) is my favourite, I like coke studio sessions as well, I appreciate the way they are reviving the old classics. (Student No. 2)*
- *Yes, I listen to music, that is part of my routine whenever I am working on my design projects the music must keep on playing in the background. (Student No. 10)*
- *I like Bollywood movie songs; sometimes I listen to English songs as well. (Student No. 28)*
- *Whenever I am travelling in public transport, I like to listen to famous music tracks. (Student No. 40)*

Finally, the last question is based on how students like to spend their free time, ranging from taking out time for hobbies, spending time with family and friends, watching tv, and responding that they do not even have free time for any hobbies. Students who answer that they never had time for any hobbies, book reading, or for doing anything constructive show that they never gave importance to these activities. The following quotes show the range of student's responses.

- I make a point of making some time available for me because otherwise architecture would take over your whole life and you will start feeling insane. So, I like to take out some time, and I paint at that time, I also like to read a lot. *(Student No. 12)*
- Mostly I like to watch documentaries about architecture, other than that I will watch any good Hollywood movie. *(Student No. 25)*
- I like watching movies a lot, but I never watched English movies. I only watch Bollywood movies. *(Student No. 19)*
- *There is no free time in architecture, people who talk about maintaining hobbies are definitely lying, or maybe they are joking. (Student No. 41)*

9.6.4 World view

Students' views about how to live in the world and what aspects are essential for self-development were explored through three questions. First is the importance of social interactions with friends and colleagues as means of personality development and learning, and the answers range from social interaction is very important, to not important, to never thought about it. Following students' quotes show the range of responses:

- *Social interactions are very important, that is how you learn to move in society. It gives you confidence which is definitely needed in architectural education. (Student No. 1)*
- *I think it is good if you know how to talk to people, it gives you benefit in architectural education. (Student No. 32)*
- *Educational performance is not dependent on social interaction, that is what I think, but on the other hand, I have seen people who do not work a lot, but they get better marks by buttering the teachers. (Student No. 15)*
- *I never thought about it. (Student No. 43)*

The second question is the importance of travelling and exploring for the same purpose. Answers range from very important to never thought about it, students who responded that they never thought about it show the signs of most oblivious habitus because they are most ignorant about what can help them develop and excel in life. Following students' quotes show the range of responses:

- *I think it is significant for the exposure and to see what other cultures have in their cities how they have developed their societies, I think when a person is well travelled, he/she is more accepting of different cultures and different ways of living, and he has much open mind to accept new ideas. So, I think travelling has helped in learning architecture as well. (Student No. 5)*
- *Whenever I do get spare time, I like to travel as much as I can, that is something that allows you to drain off your saturation which you had developed throughout the*

semester. Also, when you travel, you get experiences which helps you to grow as a person and as an architect. (Student No. 32)

- *I think travelling is good for relaxation and for taking a break, I am not sure how it affects architectural learning, I mean I don't see a direct connection. (Student No. 27)*
- *I am not sure about it (travelling); it can be helpful. I never really thought about it. (Student No. 42)*

The last question is what students' goals in life are; it does not matter what actual goals they have, the most crucial thing instead is that how much they have thought about it and how passionate they are for achieving their goals in life. That is why answers to this question are put in a range of clearly defined goals to never thought about it. Following students' quotes show the range of responses:

- *I have always liked architecture; I have seen my father working in an office (architecture office) from childhood, and I was always clear that this is something I want to do when I grow up. I am happy I am doing it. (Student No. 11)*
- *Right now, I am very focused on getting the degree and completing my education; I will see what I do next after graduation, maybe I will like to go for further studies, not sure yet. (Student No. 17)*
- *I would like to work in an architectural office, of course, but I will see what happens after graduation. (Student No. 38)*
- *I never thought about life goals. (Student No. 43)*

9.6.5 Perception of the profession

The last set of questions exploring students' habitus is based on their perception of the profession of architecture. It starts with what their first choice of profession was, ranging from architecture, to they never thought about this before entering the school. Following students' quotes show the range of responses:

- *I always wanted to be an architect. Growing up, I used to see my parents work in the architecture office, and I always found the work fascinating. (Student No. 9)*
- *I didn't think about architecture; actually, I use to think I'll do business administration or something like that. (Student No. 17)*
- *I actually had no idea about architecture, after FSc exams I was sitting with my friends and we decided we should make a list of options for different professions and someone from that group mentioned architecture that it is a good field to join. (Student No. 21)*
- *1 year before starting school I had no idea that there is a field by the name of architecture, from early childhood I was told that I would become a doctor and that was the only thing I knew. (Student No. 34)*

The second question explores their reasons for entering the profession of architecture, and the answers range from by their own choice, to simply because they got admission based on the merit of the university. Following students' quotes show the range of responses:

- *I liked architecture for two reasons first I thought I would be able to explore my creative side in this field and second, I liked architecture because I like meeting new people talking to them, and discuss their likes and dislikes. (Student No. 16)*
- *I always wanted to be an architect, because this is the profession that sort of lets you do so many things under one discipline, even when we are in our studio and designing a project, we are not just focusing on the building design. (Student No. 10)*
- *I loved to draw and sketch and I wanted to do something in arts, then a family friend of ours suggested that she should join architecture and my parents liked the idea because they felt fine arts was not a serious profession. (Student No. 18)*
- *My parents wanted me to be a doctor, but I never liked to study biology..... I was not attracted to engineering fields as well; I had some idea about the profession of architecture, I read about it in a novel where the main character was an architect. I thought this is something I should be doing. (Student No. 25)*
- *I had an interest in engineering mainly, but I also applied to architecture to be on the safe side. And I got admission in architecture, not engineering so I joined it. (Student No. 39)*

In the range of answers for the last two questions, architecture is at the highest point not because it is the most prestigious profession, but because these students managed to get admission in their first choice of profession which shows that they set a goal and worked for it. The answer “never thought about it” shows that they lack any self-motivation and aspirations in life, similarly “getting admission based on merit” communicates the same message.

The third question is based on their perception about architecture before joining the school of architecture, and the answers are ranging from it is a complicated subject, to it is just drawing and stuff girls do.

- *I knew it is a very complicated field and will be challenging to learn, I talked to some seniors before joining the school, and they guided me on this. (Student No. 5)*
- *I did a lot of research; I did not want to commit to a profession for my whole life without knowing what I am going to do in it. So, I did a lot of internet research. I even went to meet some architects' friends of my father and saw how architecture firms work and what kind of work an architect has to do. (Student No. 10)*
- *I had this perception that this is going to be a very creative field; I will be able to do a lot of creative stuff. I do not know why it was different from most of my class fellows*

as they had this perception that they are going to design building right away, but I never thought that. (Student No. 29)

- *I used to think that this field is about arts and crafts and not a very serious profession like something girls will do. (Student No. 41)*

The fourth question explores students' reasons for choosing their particular school of architecture, and the answers range from the reputation of the school of architecture to just got admission in this university based on merit. Interestingly none of the students talked about exploring the school's ranking online, instead, even the students showing signs of most cultivated habitus rely on the public reputation of the school. Following students' quotes show the range of responses:

- *I was advised by the friends already doing architecture that it is better to join this school as it is quite motivated to introduce innovation in this field; for this reason, I joined it. (Student No. 3)*
- *I joined this school because it is in this well-reputed engineering university; my parents always wanted me to join this university. (Student No. 37)*
- *I came to this university because a few of my family members were studying here, so we were familiar with the university. (Student No. 19)*
- *Because of its cost, proximity to my house and then I had a friend studying here already. (Student No. 23)*
- *I applied to a number of universities; I only got admission here. (Student No. 36)*

The fifth and last question explores students' plans after graduation, and the answers range from having well-thought-out plans for high achievements such as establishing their own business or going abroad for higher studies, to not have thought about it. Following students' quotes show the range of responses:

- *To be successful in the profession and earn good money to have a good stable life. (Student No. 11)*
- *I will work in some firm for some time to get field experience of course, after that at some point I want to establish my own practice and I want to train myself for that from day one. (Student No. 9)*
- *I haven't thought about it yet, but I think the right thing for me to do is to get some experience in the architectural offices, but I'll have to discuss with my parents about this. (Student No. 37)*
- *I will find a job at some architecture office, that is the way to move forward, I think. (Student No. 8)*
- *I do not know, I never thought about it, I am just concerned about finishing my degree at this point. (Student No. 22)*
-

9.6.6 Final categories

The final categories of habitus and the identification of each students' habitus are done in two stages during the analysis. The first stage was done in the previous section where students' answers to different questions were explored and the ranges of their answers were explained. Three categories of their responses were found in the data representing cultivated, mezzo, and oblivious habitus as explained at the beginning of section 9.6. In Table D-1 in Appendix D the three categories are shown through the numbers 1, 2, and 3; where number 1 represents cultivated habitus, number 2 represents mezzo habitus, and number 3 represents oblivious habitus. These categories are created by reviewing students' answers multiple times that were coded in NVivo 12.

In the second stage, each students' answer is examined against the defined three categories. Students having most answers that fall into one category are identified in the study as having that habitus. For example, if most answers lie between the first two categories of answers, that student contains cultivated habitus and so on. However, if the answers are somewhat equally distributed in different categories, then the students are assigned a "mezzo habitus". In some cases where the distribution of the answers to the different categories is not very clear, the interviews are opened again and analysed for some clear signs in the discussion before assigning any habitus. Table 9.1 shows the habitus group of each student assigned after a detailed analysis of their answers.

Student number	Cultural Capital Group	Habitus Group	Student number	Cultural Capital Group	Habitus Group	Student number	Cultural Capital Group	Habitus Group	Student number	Cultural Capital Group	Habitus Group
1	High	Cultivated	12	High	Cultivated	23	High	Mezzo	34	Middle	Mezzo
2	Middle	Mezzo	13	Low	Oblivious	24	Low	Oblivious	35	Low	Oblivious
3	High	Cultivated	14	Low	Oblivious	25	High	Cultivated	36	Low	Oblivious
4	Middle	Mezzo	15	Low	Mezzo	26	Middle	Mezzo	37	Middle	Mezzo
5	High	Cultivated	16	High	Cultivated	27	Low	Oblivious	38	Low	Oblivious
6	Middle	Mezzo	17	Middle	Mezzo	28	Middle	Mezzo	39	Middle	Mezzo
7	High	Cultivated	18	High	Cultivated	29	Low	Oblivious	40	Low	Mezzo
8	Low	Oblivious	19	Middle	Mezzo	30	Low	Mezzo	41	Middle	Oblivious
9	High	Cultivated	20	Low	Oblivious	31	High	Cultivated	42	Middle	Oblivious
10	High	Cultivated	21	Middle	Oblivious	32	High	Mezzo	43	Low	Oblivious
11	High	Cultivated	22	Low	Oblivious	33	Middle	Cultivated	44	Middle	Mezzo

Table 9.1: Cultural Capital and Habitus group of each student

A direct relationship of the cultural capital group with the habitus group of students is found. As it can be seen in Table 9.2, out of 13 students from the cultivated habitus group 12 possess high cultural capital. Similarly, out of 15 students from the oblivious habitus group, 12 possess low cultural capital. There are only a few outliers in each habitus group, as students with mezzo habitus show the most variation in terms of cultural capital. So, cultural capital has a direct impact on the habitus of students (Table 9.2).

Habitus Categories	Number of students in each category	Cultural capital		
		High	Middle	Low
Cultivated habitus	13	12	1	0
Mezzo Habitus	16	3	10	3
Oblivious Habitus	15	0	3	12

Table 9.2: Cultural capital of students from different habitus groups

9.7 Learning approaches

Students learning approaches are investigated based on the research framework explained in chapter 6 (section 6.10). It is explained in detail in the next sections.

9.7.1 Investigation of learning approaches in the literature

A very detailed analysis of literature in chapter 3 concludes that deep and surface learning approaches by Maton and Saljo (1976) and knowledge codes by Bernstein (1972) provide the framework for the investigation of students' learning approaches in this study (section 3.13). Deep and surface learning approaches explain how students deal with knowledge in the school of architecture, particularly in the design studio. Knowledge codes explain how they develop pedagogic relations with teachers and how they deal with knowledge gained in other subject areas. The relationship of these notions to the entire theoretical framework is discussed in chapter 6 (Figure 6-4), which further clarifies the importance and relevance of the concepts for the study. Both methods are investigated independently in literature and have never been studied together. A detailed explanation for the methodology and data collection techniques used in literature for both these methods is discussed in section 6.11.5. This discussion concluded that semi-structured qualitative interviews are the most

appropriate method for data collection for the investigation of learning approaches in the current study.

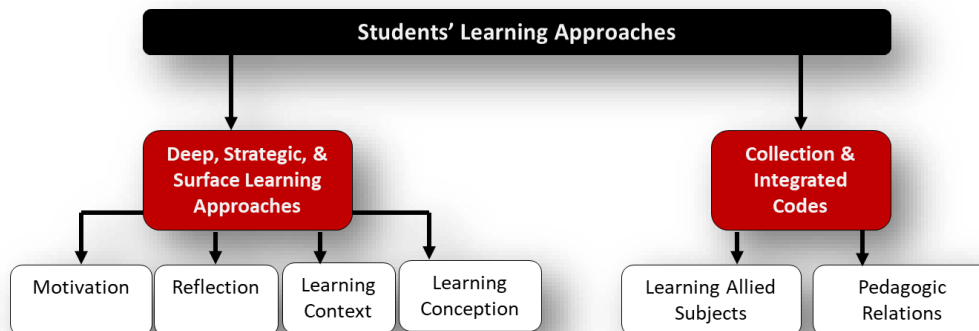


Figure 9-2: Different concepts in literature exploring learning approaches and knowledge codes.

Figure 9-2 is based upon the explanation of learning approaches and knowledge codes in chapter 3, and the relevance of these concepts for this study explained in Figure 3-8. It identifies concepts like motivation, reflection, learning perception, learning context, learning conception, and learning allied subjects. For these concepts, the range of notions defining the deep and surface learning approaches are explained in Figure 9-3. The concepts of learning approaches and knowledge codes are combined in this figure, as students' role in developing pedagogic relations becomes a part of the learning context. This figure is essentially an update on the established model of deep and surface learning approaches, as it includes students' willingness to develop pedagogic relations and integrating knowledge.

This model is comparable to the concept of "Bildung", this is a German concept with no literal translation in English. This is based on developing individual capabilities with self-direction and learning (Fuhr, 2017). It also claims that in order to be "educated", a person needs to be aware of a variety of subjects and should be aware of the underlying principles of these subjects. Although it is considered and explored in a variety of contexts, the self-cultivation nature of Bildung (Bohlin, 2013) is relatable to the essence of this newly developed model of learning approaches (Figure 9-3). As Kroth et al. (2018) discussed that under the concept of bildung learning is a self-directed activity and is concerned with questioning societal assumptions, particularly to free the mind from hegemonic assumptions. Koller (2002) explored the concept of bildung in association with habitus and cultural capital and discussed

that with self-directed education, students' cultural capital improves which transforms their habitus.

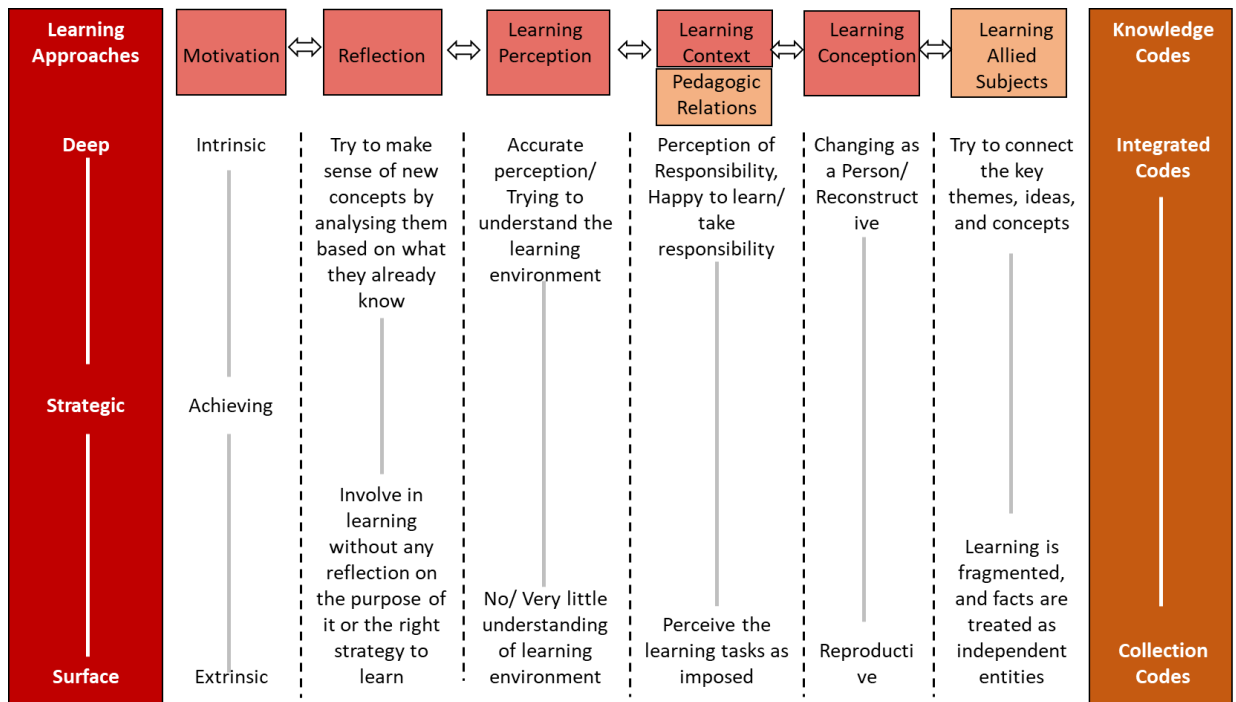


Figure 9-3: Range of concepts defining the deep and surface learning approaches

The learning approaches model in Figure 9-3 suggests that all aspects of learning approaches are interrelated and are directed by students' motivation levels. Table 9.3 further explains the concepts discussed in Figure 9-2 and explores their relation to the questions asked in the qualitative interviews.

9.8 Learning approaches in the current study

One important aspect related to the concepts explored in this study is that they are based on the understanding that design studio is the main subject in architectural learning, as explained in chapter 4 (section 4.6). So, all the concepts of learning approaches are based on students learning in the design studio, even the exploration of allied subjects is in connection with the design studio. As explained earlier, the learning approaches of students in this study are explored through semi-structured interviews.

Concepts related to learning approaches and knowledge codes	Questions asked in the interviews to investigate the concepts	Relation of questions asked to the field of Architectural education
Motivation	Did you come to Architecture by choice?	Entry to School (4.7.5)
	What is your first instinct to do when taking up a new project?	Pedagogic practice of design studio (4.6.1)
	Do you enjoy working on the design projects?	
Reflection	Do you try to understand or question what you have learnt from a particular design project?	Pedagogic practice of design studio (4.6.1)
	Do you think about your strengths that might be helping you in learning architecture.	Reflective Practice (4.6.3)
	What have you found most difficult in learning architecture?	Threshold Concepts (4.7.4)
Learning Perception	What was your perception of architecture before joining the school?	Entry to School (4.7.5)
	How can you describe your learning experience in the school so far?	First interaction with Architecture (Cuff, 1992)
	How perception has changed with time spent in the school?	Learning's transitional effect (Lueth, 2008) Habitus Transformation (Bourdieu 1984)
Learning Context	How important is teacher's guidance for learning in the design studio?	Architectural Student and Tutor (4.8)
	What is your opinion about the requirement of social interaction with fellow students?	Social Dynamics (4.7.2)
	What is your opinion about the requirement of presenting and defending your work?	Architectural Review (4.9)
Learning Conception	How useful you have found the previous education in learning architecture?	Not discussed in literature.
Curriculum Boundary	How useful you have found other subjects (other than design studio) in learning architecture?	Architectural Taught Curriculum (4.5)
	How often do you take inspiration or embed the concepts learnt in other subjects in your design projects?	

Table 9.3: Questions exploring the learning approaches in the interviews and their link to literature on architectural education

The semi-structured nature of the interviews implies an organic discussion between the researcher and students; however, there are few key questions included in all the interviews that are based on different aspects of deep and surface learning approaches and knowledge codes identified in Figure 9-2 and Figure 9-3. Table 9.3 explains the relationship of the key questions to these aspects; it also identifies how these fundamental questions are based on the field of architectural education explained in chapter four.

Questions are designed in a way that they seem natural to students and are easy to answer for them. For example, when asking about motivation, students are not asked if they have intrinsic or extrinsic motivation. Instead, they are asked if they enjoy working on the design projects, and what is their instinct to do at the beginning of the project. This determines if students take the learning tasks as a burden or they are self-motivated to learn. Also, if they try to follow teachers' instructions blindly or try to start working on their own and with what motives, indicating if they have intrinsic, extrinsic, or achieving motivation.

Answers to the questions from the semi-structured interviews are transcribed and coded using NVivo 12. There are a total of 44 interviews conducted for this study. Three groups of students' habitus are created in this study, as explained in section 9.6.6, so now three files of NVivo 12 are created, dividing students according to their habitus. This division helps to explore the response of learning approaches by each habitus group individually. Table 9.4 describe the number of interviewed students in each habitus group.

University Groups	Number of Interviews
Cultivated Habitus	13
Mezzo Habitus	16
Oblivious Habitus	15

Table 9.4: Number of interviews in each habitus group

To explore the learning approaches, inductive coding is done in the first coding cycle. This implies coding all the information in interviews as emerging themes; this is done to make sure no critical information is left out. This method is similar to open coding used to explore students' habitus. In the second cycle, deductive coding is done, which means coding the interviews based upon a "codebook" as a reference to guide through the coding process

(Bazeley & Jackson, 2013). In this study, the concepts related to learning approaches and knowledge codes act as the codebook. Students' perception of these concepts is explored through the questions asked in the interviews (identified in Table 9.3). Using both inductive and deductive methods for coding ensures the research is evident and free from biases (Boyatzis, 1998). Responses of each student are coded under the concepts of learning approaches and knowledge codes.

As mentioned earlier, in the coding process for student's habitus, saturation was achieved after 10-11 interviews. However, now interviews are divided into three groups, and learning approaches are observed separately in each group, so it is essential to determine if saturation is achieved in each group. In all habitus groups, no new codes emerged after 10-12 interviews implying data saturation (Saunders et al., 2018).

9.9 Findings

The findings from the interviews are discussed for each question in this section. Categories of students' answers are created for these questions based upon the NVivo codes by combining several similar answers, and the number of categories varies for each question depending upon the variations in students' responses. Figures 9.4-9.19 identify these categories on the vertical axis, students' motivation level is also mentioned in relation to the categories. This motivation level defines all aspects of learning approaches as discussed in Figure 9-3.

Habitus categories investigated earlier in this chapter are placed on the horizontal axis. Each small circle identifies a student, the unique number for each student is written in the middle of the circle, these numbers remain constant throughout the study, making it possible to track each student's response for all the concepts discussed. Based on their habitus explored in the previous section, these circles are placed in 1 of the 3 categories of habitus. Also, based on the relevance of their answers to the categories of responses, they are placed against one of them. Colours of these circles identify the institutional habitus of the students. In Figure 9-17 colours represent the type of early education that students had, including Matric & FSc, O & A levels, and DAE.

9.9.1 Motivation

The motivation that is part of students' learning approaches is inquired in this study by asking them three questions. These are, if students have entered architecture by choice, what is their instinct to do at the beginning of the project, and if students enjoy working on the design projects. Answers to these questions determine if they have intrinsic, extrinsic, or achieving motivation. As shown in Figures 9.4, 9.5, and 9.6, categories of students' responses are created for each of these questions, these categories are based on examples of students' responses in tables D-2, D-3, and D-4 in Appendix D. Each student's position against these categories is also identified in these figures. Students' responses to all three questions in relation to their habitus group are discussed below.

Question 1: Did you enter the profession of architecture by choice?

For this question, most students from the cultivated habitus group responded that they always wanted to join architecture, showing intrinsic motivation. Most students from the mezzo group responded that they investigated the profession and then decided to join showing achieving motivation. Students' responses from the oblivious habitus group are divided almost equally into second and third categories showing achieving and extrinsic motivation respectively. Quotes from students confirming these responses are given below, the numbering of these quotes concurs to the categories these students belong to, as shown in Figure 9-4.

1. *You have to see what ways you can benefit society; what people need. And architecture is something our society really needs, sensitive and socially inclusive architecture. I mean if you talk about the city of Karachi, the lack of proper city development and urban design have created a lot of problems. I always used to feel bad moving around in the city and then when I became a little older, I realised I could do something about it by joining architecture, that is why I always wanted to be an architect. (Student No. 10)*
2. *After FSc. exams me and my friends discussed what are the options for us to pursue, and we did some research, then I came across architecture, and I thought it could be a good profession for me. (Student No. 35)*
3. *I didn't do any research; I had this perception about architecture that it is going to be a very easy field, and I will not have to do a lot of work or study a lot. I personally had no interest in architecture. (Student No. 27)*

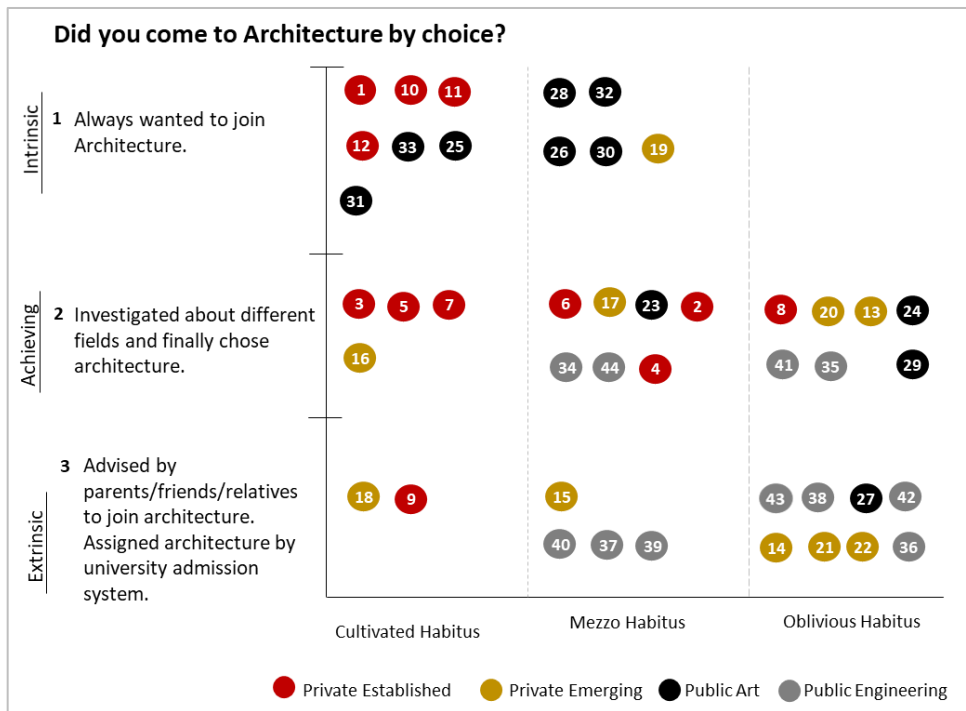


Figure 9-4: Students response to reason for their choice of architecture

Question 2: What is your first Instinct to do when taking up a new project?

For this question, the majority of students from the cultivated habitus group are showing intrinsic motivation, as they mentioned that at the beginning of projects, they take the initiative, rather than just following teachers' guidance. Responses of students from the mezzo habitus group are divided into three categories. However, the majority of students stated that at the beginning of the project they proceed by trying to understand the project requirements that can lead them to perform better and get good grades, showing achieving motivation. Responses of the majority of students from the oblivious habitus group lie in the third category, that is students try to work out tasks on a weekly basis, showing extrinsic motivation. Quotes from students confirming these responses are given below, the numbering of these quotes concurs to the categories these students belong to, as shown in Figure 9-5.

1. *My thought process is derived from concepts; I read a lot of books and try to find some relevant articles as well. Teachers always tell us to read, but I think students do not take it seriously, I do not understand how they come up with ideas without reading. (Student No. 20)*

2. *I try to understand the project brief and what kind of work is expected from us. I think it is essential to be clear about these things. (Student No. 23)*
3. *In the beginning, I just try to follow teachers' instructions, and with time when I have a better understanding of the project, I feel more confident about asking questions. (Student No. 13)*

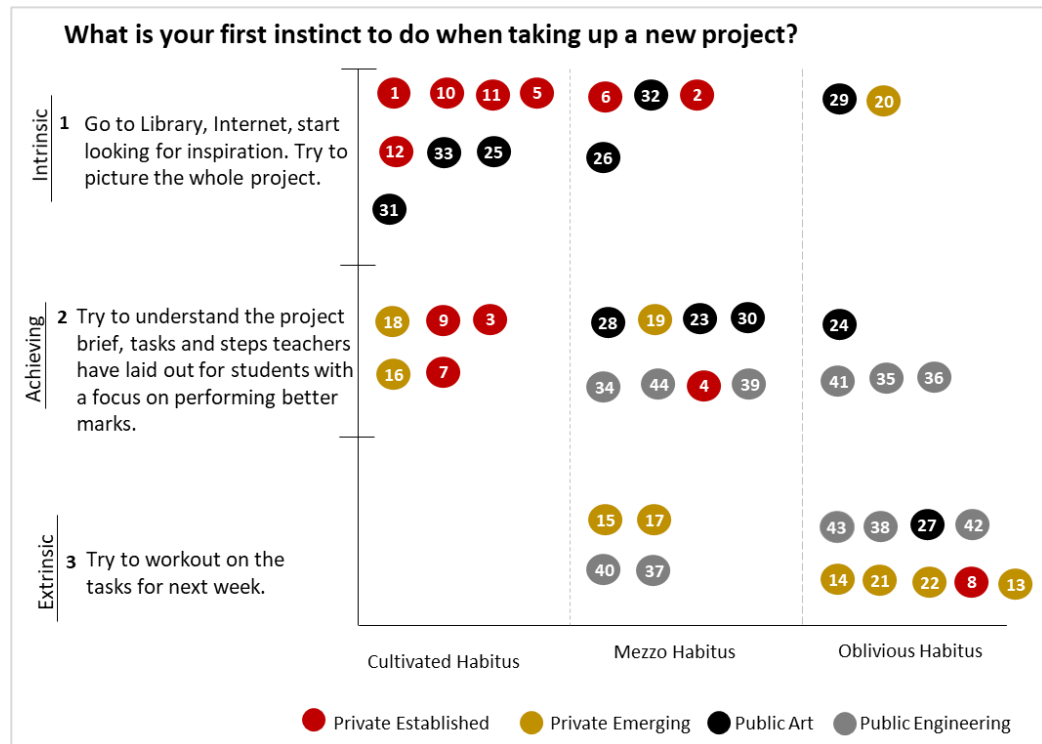


Figure 9-5: Students response to first instinct when taking up a new project

Question 3: Do you enjoy working on design projects?

For this question, a vast majority of students from the cultivated habitus group responded that they enjoy working and learning on the design projects, showing intrinsic motivation. The majority of students from the mezzo habitus group also responded that they enjoy working on the design projects, showing intrinsic motivation for this question. Many students from the oblivious habitus group responded that they do not enjoy the beginning of the project, but as they get to hold on to the project, it becomes more comfortable and enjoyable. Quotes from students confirming these responses are given below, the numbering of these quotes concurs to the categories these students belong to, as shown in Figure 9-6.

1. *Being able to design and seeing the project getting towards completion and then having good comments on it is the best part of the architecture. (Student No. 16)*

2. *It is certainly a complicated and lengthy process, but over time I have learned to enjoy it. (Student No. 6)*
3. *Architecture is a lot of work; design projects are particularly challenging in terms of time management, sometimes it is even difficult to understand what it is we are expected of doing. (Student No. 17)*

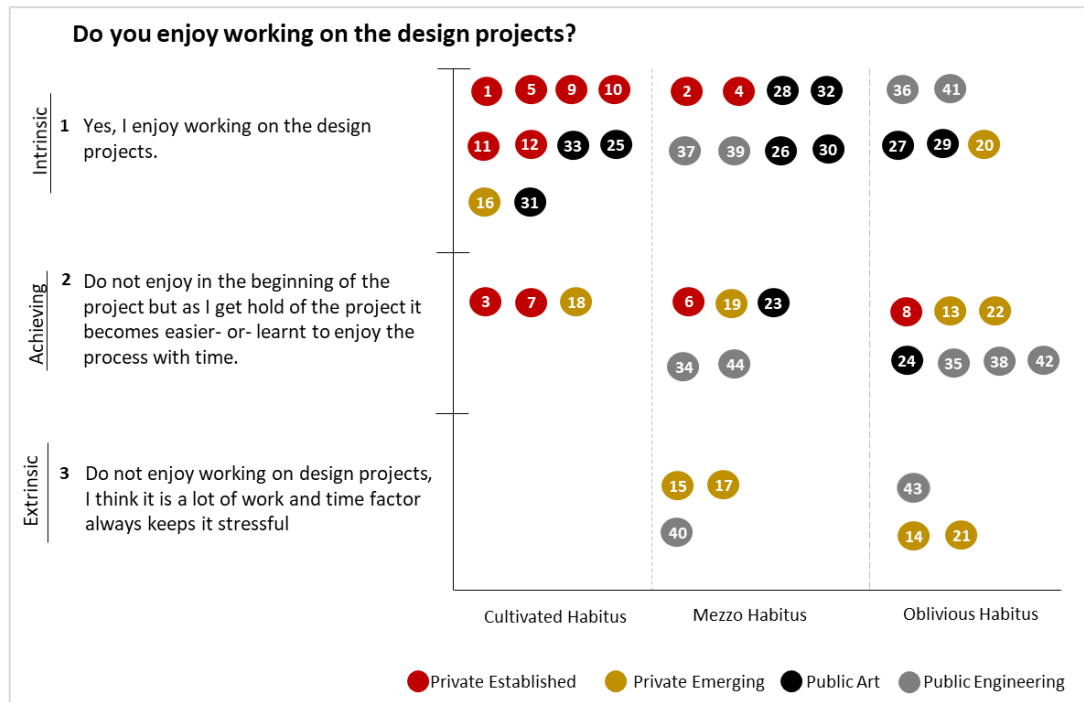


Figure 9-6: Students' response to enjoying working on the design project

9.9.2 Reflection

Reflection, which is the second concept associated with learning approaches is investigated in the interviews through three questions. These questions are based on students' understanding of what they are learning from a specific project, their strengths, and the difficulties they face while learning architecture. As shown in Figures 9.7, 9.8, and 9.9, categories of students' answers are created for each of these questions, these categories are based on examples of students' responses in Tables D-5, D-6, and D-7 in Appendix D. Each students' position against these categories is also identified in the Figures 9.7, 9.8 and 9.9. Students' responses to all three questions are discussed in the next sections.

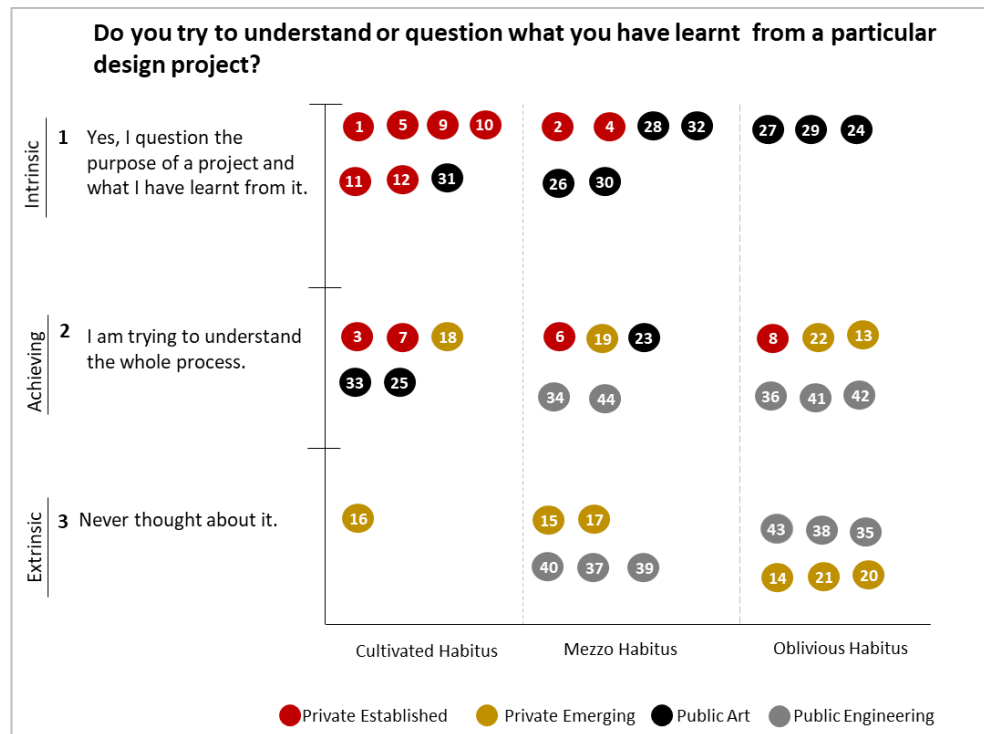


Figure 9-7: Students' responses to understanding what has been learnt from a design project

Question 1: Do you try to understand what you have learnt from a design project?

For this question, the majority of students from the cultivated habitus group responded that they question the purpose of a project and what they have learned from it, showing intrinsic motivation. The number of students with this response decreases in the mezzo habitus group, though it is still the most popular response in this group of students. The majority of students from the oblivious habitus group responded that they are trying to understand the process of designing a new project, showing achieving motivation. An equal number of students from mezzo and oblivious habitus responded that they never thought about it, showing extrinsic motivation. Quotes from students confirming these responses are given below, the numbering of these quotes concurs to the categories these students belong to, as shown in

Figure 9-7.

1. *I question the importance of design projects; if I don't understand the purpose of the work I am doing, I cannot motivate myself, I won't know what to think. (Student No. 9)*
2. *Architecture is very different from anything I have studied before, that is why the first year was extremely difficult, it was challenging just to make sense of things, but with*

time I have learned to understand the requirements and purpose of projects, I had to learn how to ask right questions. (Student No. 34)

3. *So far, I never question the purpose of the project, maybe because teachers explain it well and I never thought to question it. (Student No. 35)*
- 4.

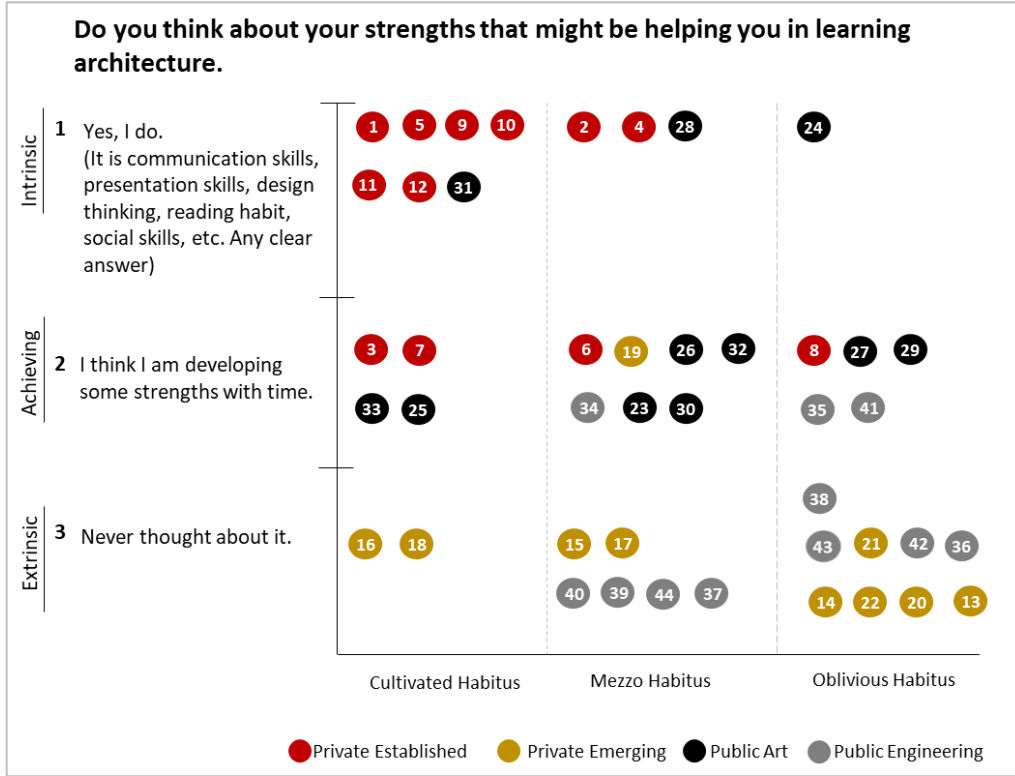


Figure 9-8: Students' responses on their strengths

Question 2: What do you think is your strengths in learning architecture

For this question, all the students that provided a confident answer about their strengths are showing strong reflection and intrinsic motivation; it does not matter which strength they are identifying. The majority of students from the cultivated habitus group answered that they have some strength, showing strong reflection. Whereas the majority of students from the mezzo habitus group, and many students from the oblivious habitus group responded that they are developing strengths with time, showing some reflection and achieving motivation. Almost an equal number of students from the mezzo and oblivious habitus group answered that they never thought about it, showing that they possess extrinsic motivation. Quotes from students confirming these responses are given below, the numbering of these quotes concurs to the categories these students belong to, as shown in Figure 9-8.

1. *I have always been a good student, and I think my education has prepared me for critical thinking and questioning the realities, and that is helping me to perform better in architecture. (Student No. 5)*
2. *Now I understand that it (assignments and projects) was valuable training for me, mainly because I had no background in art and design, I have never been involved in art activities in school and that is why I did not have an understanding of how to think like a designer, meaning how to think about putting things together to make them look beautiful or to arrange things in a manner to convey some message. (Student No. 23)*
3. *I am thinking about it now when you asked, never thought about it before. (Student No. 17)*

Question 3: What aspect of learning in learning architecture you have found most difficult?

For this question, almost all the students in interviews identified long working hours as the most challenging aspect of architectural learning. However, only those students that did not identify any second aspect as the most difficult, are mentioned in the first category. This implies that these students find all other aspects of architecture not so difficult, showing a deep learning approach. The majority of these students belong to the cultivated habitus group.

Students who identified any other aspect (design jury, understanding how to start a new project, social interactions) as difficult are showing that they think and strategies about the requirements of architectural learning, showing strategic learning approach. The majority of students from the mezzo and oblivious habitus group are in this category.

Students that answered “never thought about it” are showing surface learning approaches. Quotes from students confirming these responses are given below, the numbering of these quotes concurs to the categories these students belong to, as shown in Figure 9-9.

1. *I am happy about the fact that I have chosen a field that gives me creative freedom and I do love working in the studio. But sometimes I feel the requirements of the amount of work we are expected to produce and the amount of time we need to give is just too much. (Student No. 1)*
2. *I think juries are terrifying, no matter how confident you are and how good you think your design is when you have to stand in front of a panel and explain yourself it is challenging. And I think if you have produced a good design but cannot explain it well in front of people, then your marks will suffer. (Student No. 29)*
3. *It is a tough field, you never know what to do, you spend hours trying to figure out the work, and then when you create something giving your best, teachers just won't like it and make us feel that everything we do is complete crap. (Student No. 32)*

4. *I didn't find architecture very difficult, in fact, I enjoyed the work in the first semester a lot, it was very much based on arts, and I loved to do it, the difficult part for me, however, was to adjust to the social requirements of the school. (Student No. 21)*
5. *There are many things; I can't really think of anyone thing. Maybe I didn't give it much thought. (Student No. 14)*

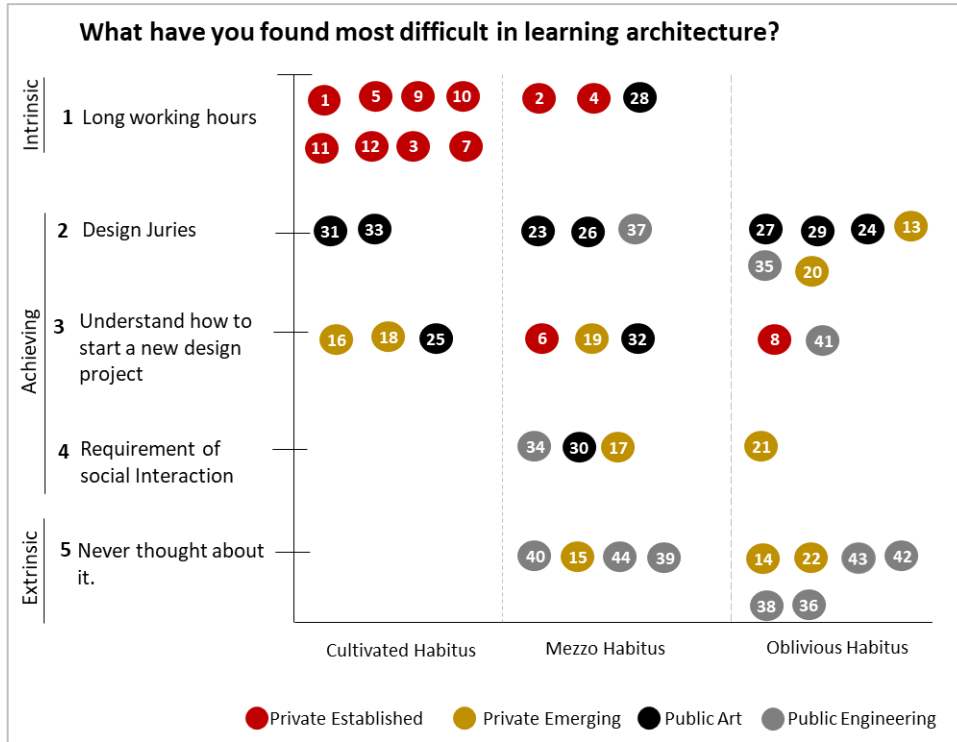


Figure 9-9: Students' responses on the difficulties

9.9.3 Learning perception

Learning perception and learning context (discussed in the next section) are both parts of “how students perceive their learning situation”, which impact their learning approaches as discussed in chapter 3 (section 3.7). Learning perception is explored through three questions in this study; these questions are based on students’ perception of architecture before joining, their learning experiences so far, and whether their perception changed with the time spent in the school of architecture. As shown in Figures 9.10, 9.11, and 9.12, categories of students’ answers are created for each of these questions, these categories are based on examples of students’ responses in tables D-8, D-9, and D-10 in Appendix D. Each students’ position against these categories is also identified in the Figures 9.10, 9.11 and 9.12. Students’ responses to all three questions exploring learning perception are discussed in the sections below.

Question 1: What was your perception of architecture before starting architectural education? Some students from the cultivated habitus group had an accurate idea about architecture, that it is a complex field based on both arts and science, showing that they have a deep understanding or perception of the profession. Only 1 student from the mezzo habitus group and no student from the oblivious habitus group had this correct perception about architecture. The majority of students from all three groups possessed a perception about architecture that it is either a complete art field or a complete engineering field. This shows that these students joined the school under the strategy of joining a specific type of profession. Few students from the mezzo and oblivious habitus group joined the school because they thought that it would be an easy profession and they will not have to study or work a lot. These students show an extrinsic motivation and surfaced perception of the profession. Quotes from students confirming these responses are given below, the numbering of these quotes concurs to the categories these students belong to, as shown in Figure 9-10.

1. *I had an understanding that in architecture a lot of work is required, but I have always found it very interesting well as every person has the chance to express their thoughts creatively. In the previous education, we used to have some books that everyone had to learn and remember the same stuff. So, this degree is exciting to me. (Student No. 9)*
2. *I used to think that this is a field related to art and I used to like art, I used to think it will be interesting, creative, and probably easy and there will not be very technical things to do. (Student No. 44)*
3. *I used to think that architecture will be just like engineering, it would be very technical and very theoretical as well. I will have to read a lot of books and learn about complicated technical things. I have found foundation year very strange; I had come here reading physics, chemistry, and mathematics, and I always used to think I will be using this knowledge in my university education. But when they asked to do art stuff in the foundation year that was a bit shocking. (Student No. 42)*
4. *I thought it would be much simpler than it is. I used to think that I will not have to do a lot of studies and a lot of work. I just have to think about things and draw. But the reality is entirely opposite; it's very time taking studies and sometimes very difficult to understand, so a lot of effort is required. (Student No. 38)*

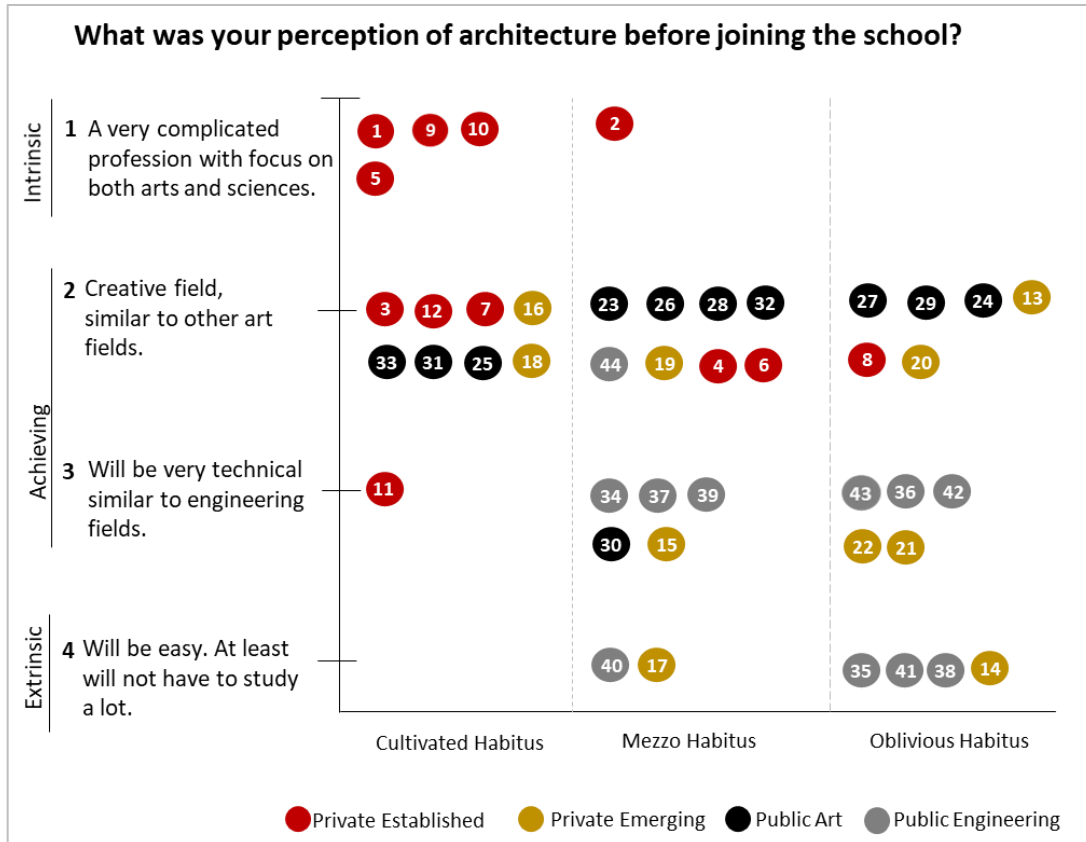


Figure 9-10: Students' response to the perception of architecture before joining

Question 2: How is your learning experience in the school so far?

For this question, the majority of students from both cultivated and mezzo habitus groups responded that they are trying to understand the learning process and things have started making sense with time, showing achieving motivation. Some students from these two habitus groups responded that they are excited and having fun in learning, showing intrinsic motivation. The majority of students from the oblivious habitus group, and some students from the mezzo habitus group responded that they are still baffled about architectural learning. Some of the students even mentioned that they keep on thinking about leaving architecture. Quotes from students confirming these responses are given below, the numbering of these quotes concurs to the categories these students belong to, as shown in Figure 9-11.

1. *I feel architecture is for me. Although I knew nothing about this field before coming here but ever since I have got here, I am enjoying it a lot, even the tough parts. (Student No. 9)*

2. *It was all right, I use to feel that we were not doing so much, although I know it was the foundation year and they were introducing us to the concepts of art and design and making us think critically, it was difficult in the beginning, but slowly I started getting hold of the concepts. (Student No. 16)*
3. *In Architecture, the first-year education was something I was not familiar with at all. I was asked to draw basic shapes and make simple models, these kinds of activities used to look like pass time for me, something kids and girls do for making pretty things, I could not think in my whole life that I will be doing this as a grown-up. I remember I didn't even complete the first design assignment given to us because I didn't see the point of doing it. I used to think that maybe I am not at the right place, maybe I am not well suited for architecture, maybe I should have joined some other field. (Student No. 43)*

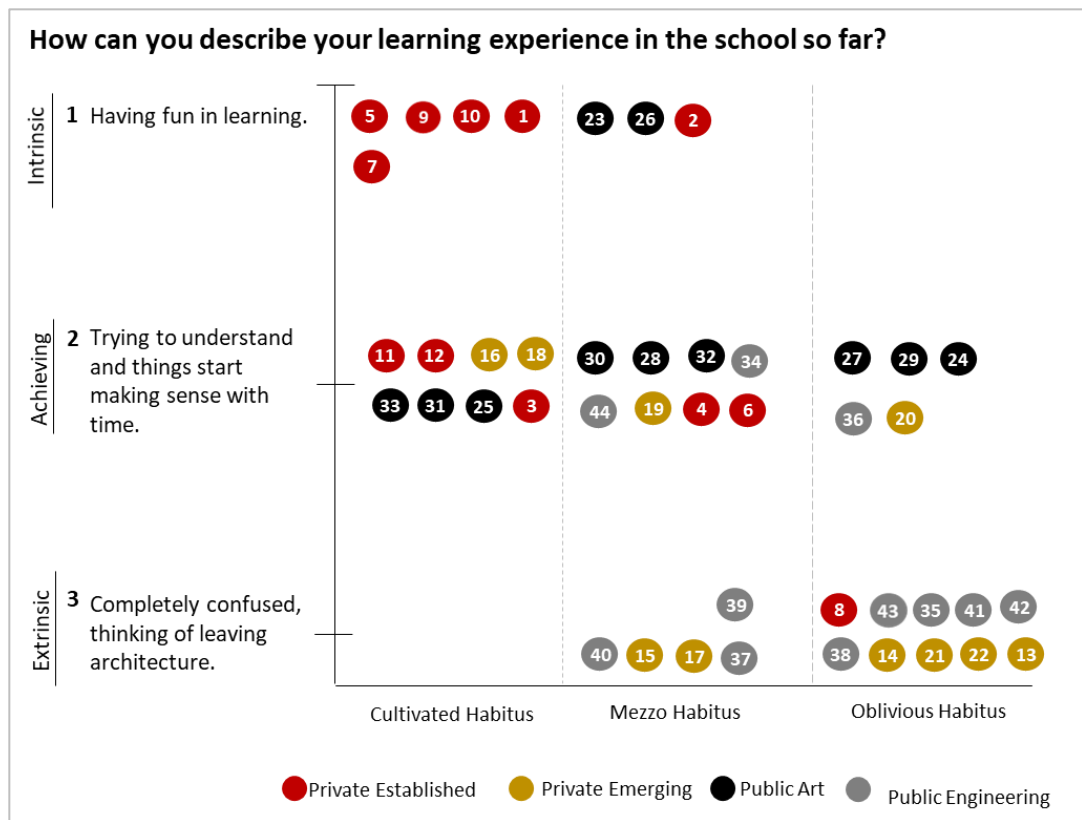


Figure 9-11: Students' response to learning experiences in the school

Question 3: What is your perception about architecture after some time spent in school?

For this question, students' response from the cultivated habitus group is divided into the first two categories, that is the perception of the profession improved, and requirements of learning became clearer after initial difficulties, showing intrinsic and achieving motivation.

Majority students from mezzo habitus group responded that the perception of the profession improved with the time spent in the school.

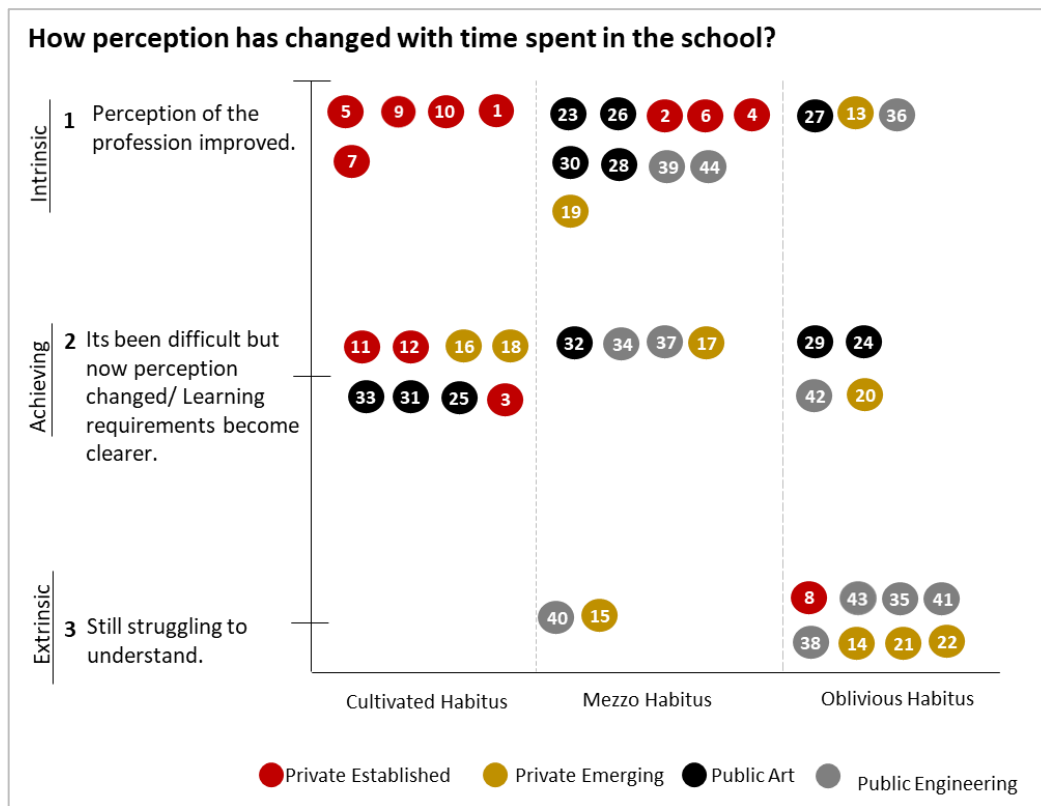


Figure 9-12: Students' response to change in perception

Response of students from the oblivious habitus group is reverse from it, as most of them responded that they are still struggling to understand architectural learning. Quotes from students confirming these responses are given below, the numbering of these quotes concurs to the categories these students belong to, as shown in Figure 9-12.

1. *I came into architecture with the thought I will be designing buildings and lots of them. But after coming here I realised that the design is highly supported by theoretical knowledge; in fact, there is a whole chunk of theoretical knowledge that I didn't realise would be there. You do practical stuff that is supported by the theoretical stuff, so it made me attracted to reading as well. So now I enjoy reading as well. (Student No. 28)*
2. *It has not been easy for me, in the beginning when I had to go out for case studies or site visits, I used to get really scared, but I have faced that time, and I have learned a lot. I never used to understand what teachers want. Sometimes they explain an assignment, and I will make it while feeling that I have done a good job, but when I show it to teachers they would ask for something more innovative and creative and I would be thinking about how I make it creative, I already have done my best, what else*

I should do. But then I started realising the requirements, and how to take the work forward, I started understanding the requirements of architecture. (Student No. 17)

3. *That it is an extremely hard field, you never know what to do, you spend hours trying to figure out the work and then when you create something giving your best, teachers just won't like it and make us feel that everything we do is complete crap. When you spend the whole night creating some design or modal, and in the morning, teachers don't think it is even at an acceptable level, it is very depressing, and I am still struggling. (Student No. 8)*

9.9.4 Learning context

Learning context, which is the fourth concept associated with learning approaches is investigated in the interviews through three questions. These questions are based on the importance of teachers' guidance for students, the requirement of social interactions, and the requirement of presenting the work. As shown in Figures 9.13, 9.14, and 9.15, categories of students' answers are created for each of these questions, these categories are based on examples of students' responses in tables D-11, D-12, and D-13 in Appendix D. Each students' position against these categories is also identified in the Figures 9.13, 9.14, and 9.15. Students' responses to all three questions are discussed in the next sections.

Question 1: What is your perception of the importance of teachers' guidance for learning in the design studio?

This question is based on knowledge codes. As discussed in the third chapter, it helps to investigate students' effort for the development of pedagogic relations in a learning context, identifying their learning approaches.

Many students from the cultivated habitus group responded that it is not good to follow teachers' instructions blindly and one should learn to make their own decisions; this shows weak framing and deep learning approaches by these students. The majority of students from the mezzo habitus group responded that according to them, it is important to follow the teacher's guidance for learning and good grades, showing achieving motivation. Students from the oblivious habitus group have mixed responses under the second and third categories. The third category states that teachers' guidance is extremely important and needs to be followed completely. Quotes from students confirming these responses are given

below, the numbering of these quotes concurs to the categories these students belong to, as shown in Figure 9-13.

1. *Teachers' opinions' are mostly helpful, but sometimes they aren't, you have to be awake, you need to know what is happening because in the end it is your own project and you need to take ownership of it. Teachers will provide crit, and they will guide you, but you have to decide what to pic from it and what not to pic from it. It happens many times that the teacher gives you advice without maybe understanding some aspects of your project, but you are the one who knows that project in much detail, and you know that implementing that advice will be a good idea or not. So, you have to use your own mind that which advice is worth taking and which is not. (Student No. 10)*
2. *I think it is extremely beneficial to follow teachers as my design improves a lot based upon teachers' guidance. I think I do not have enough exposure to decide what is a good or bad form or spaces, so when I design something and show it to teachers, they can tell me if my design is good enough to take forward or should I improve it or change it, and what aspects of design needs to be changed for better grades. (Student No. 37)*
3. *I think it is very important to listen to teachers. In the beginning, when you have no idea what to do with the projects, you start following the instructions and guidelines and slowly become familiar with the concepts. (Student No. 29)*

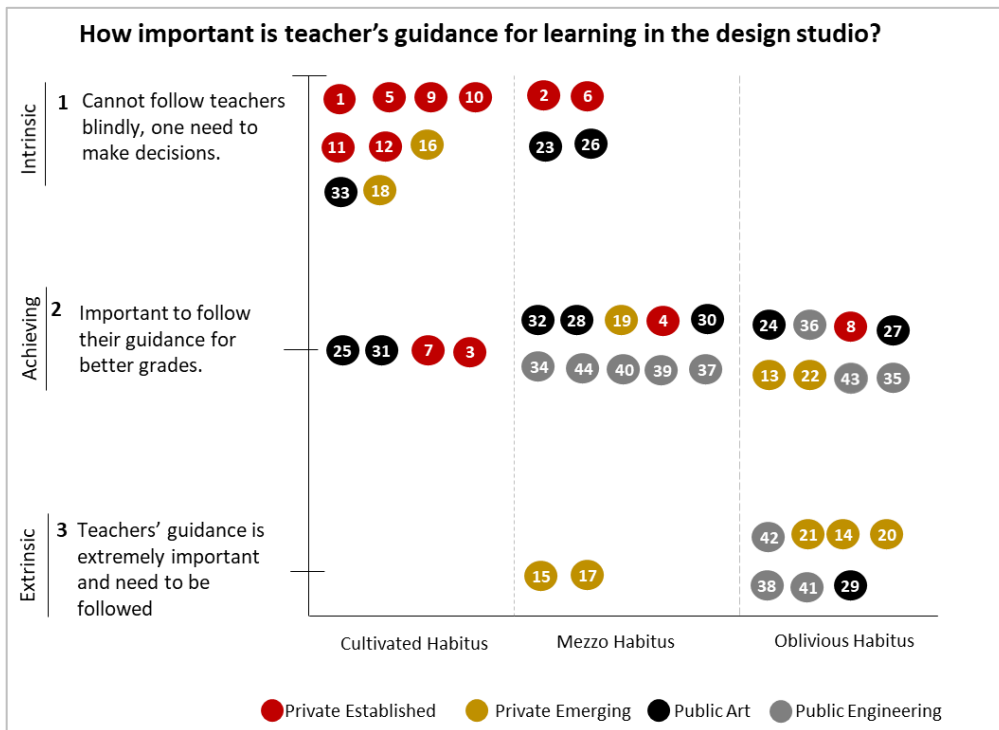


Figure 9-13: Students' perception about the importance of teachers' guidance

Question 2: What is your opinion about the requirement of peer interaction for learning?

For this question, majority students from this group said that it is good to have a strong social interactions, as it helps to learn, showing an intrinsic motivation. Students responses from the mezzo habitus group are divided into the first two categories; the second category states that for some students, it is difficult to have social interactions as they have to overcome a lot of fears. A majority of students from oblivious habitus group also responded with this answer. Very few students from all three habitus group answered that this is a waste of time, showing an extrinsic motivation. Quotes from students conforming these responses are given below, the numbering of these quotes concurs to the categories these students belong to, as shown in figures 9-14.

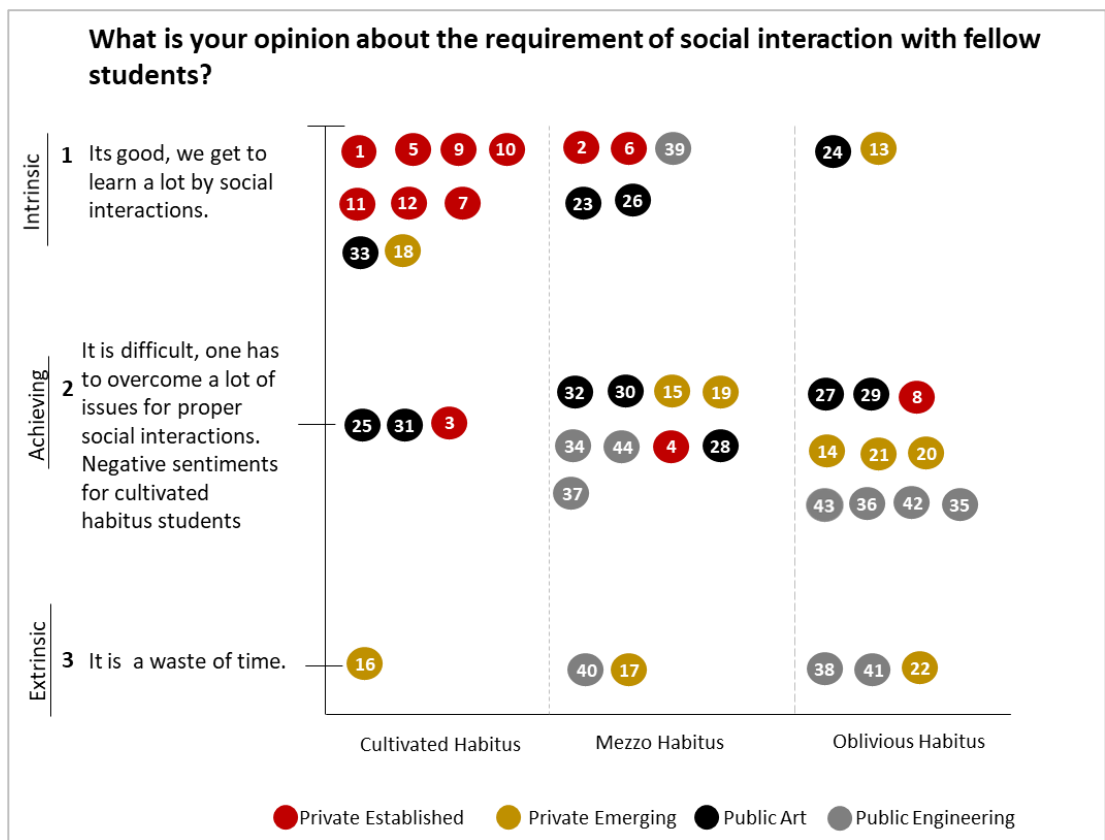


Figure 9-14: Students' perception for the requirement of social interaction

1. *There is a very strong social culture in our school, and I get to learn a lot from it, there is a culture that juniors help seniors in their work in the hostel and in return those seniors guide them in their assignments. Juniors will go to seniors' room casually even and sit there just to have a chitchat and its very common here. (Student No. 23)*
2. *People were not very helpful; they like to remain isolated in their own space. It was not like this in my village, everyone is everyone's friend there, and people communicate openly. Here people only like to communicate within their own friend's circle and do not like new people. And also I feel they like to pretend a lot like they know everything they are very cool. I do not like this. (Student No. 21)*
3. *The students with a casual attitude towards learning are more into making friends and spending time with them, but I think that kind of interaction is not healthy among students as it makes you waste your time only. So that is why I try to stay away from such groups and focus on my studies only. (Student No. 16)*

Question 3: What is your opinion about the requirement of presenting and defending the work in juries?

For this question, the majority of students from the cultivated habitus group responded that it is a good learning and social experience, showing intrinsic motivation. The majority responses of students from the mezzo habitus group are divided into the bottom two categories that are "it is tough and requires a lot of preparation", and "it is not fair", showing achieving and extrinsic motivation. Almost all students from the oblivious habitus group showed extrinsic motivation. Quotes from students confirming these responses are given below, the numbering of these quotes concurs to the categories these students belong to, as shown in Figure 9-15.

1. *I don't get very nervous in juries like my friends and class fellows. I did get nervous in the first one or two juries I think, but then I realised it is only about discussing my ideas and showing them what I have been doing and why so if I take it casually like a discussion I perform much better in juries, this is what I try to do now. I explain my work as I would explain to any friend and discuss with them my ideas and maybe because most of the time, I get good feedback I remain confident throughout in juries, and even if I get some criticism I know I don't need to take it personally, and I only need to learn from it. (Student No. 9)*
2. *It was tough in the beginning. But it is not as hard now, now at least I can talk about my work in front of people, but still, I cannot explain in a very good manner as compared to some other students in my class who speak very well. But even this change has come after a lot of effort, I had practiced a lot to talk to people; before this when I joined architecture, I could not speak a word of anyone. (Student No. 31)*

3. *I think juries are terrifying, no matter how confident you are and how good you think your design is when you have to stand in front of a panel and explain yourself it is very difficult. And I think if you have produced a good design but cannot explain it well in front of people, then your marks will suffer, because the people judging your design cannot understand your thought process behind it unless you explain it to them, you have to sell your design. (Student No. 42)*

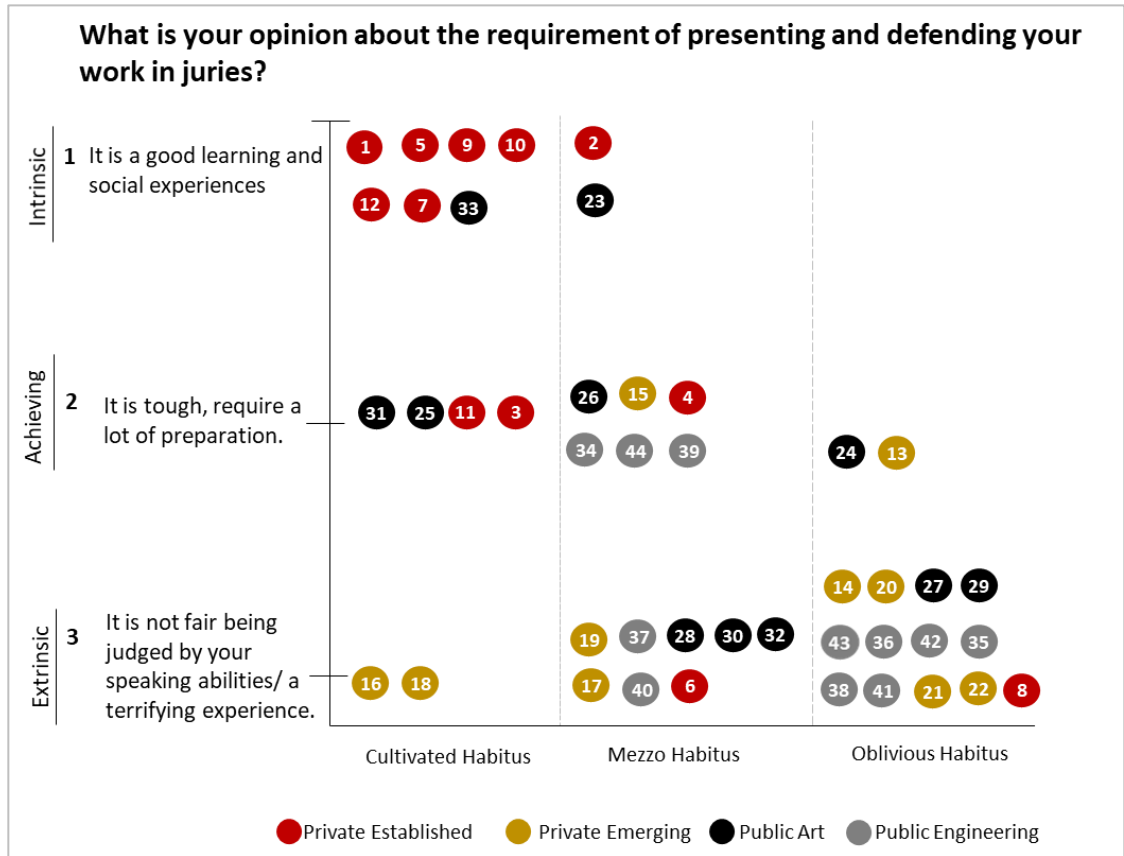


Figure 9-15: Students' perception for the requirement of Presentations and juries

9.9.5 Learning conception

Learning conception, that is the fifth concept associated with learning approaches is investigated in the interviews through one important question, which is students' perception of the usefulness of previous education in learning architecture. As shown in Figure 9-16, categories of students' answers are created for each of these questions, these categories are based on examples of students' responses in Table D-14 in Appendix D. Each students' position against these categories is also identified in Figure 9-16.

There is a clear variation of students' responses among cultivated and oblivious habitus groups, as most students with cultivated habitus responded that early education is helping

them, directly as it improved their critical thinking ability. Or indirectly by providing them confidence for communication and preparing them in general for the challenges of higher education. Most students from oblivious habitus have responded that early education is not helping them at all or helping very little. Responses of students with mezzo habitus are spread over all three categories. However, the factor that is showing clear segregation in students' responses is the type of previous education (Figure 9.17). Figure 9-17 is showing the answer to the same question, and that is why showing the same categories as Figure 9-16, but here the colour coding identifies the type of secondary education students had before coming to the school of architecture.

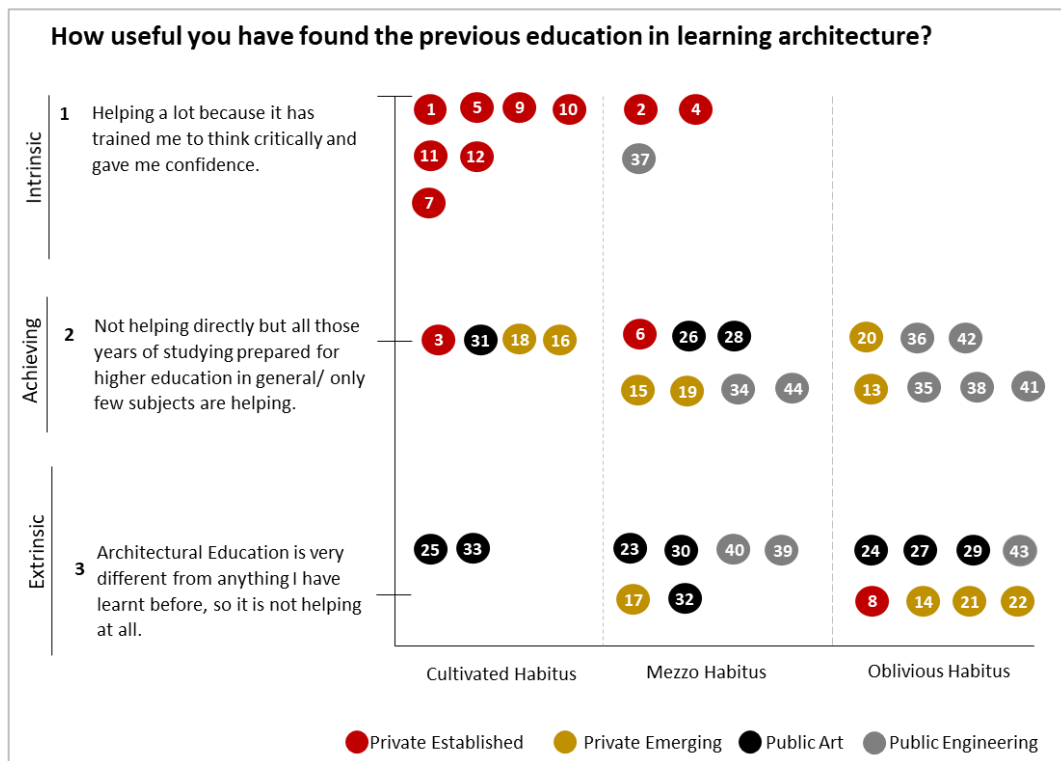


Figure 9-16: Students' perception for the usefulness of early education

The response of the students with FSc. background is spread over the bottom two categories of responses. Whereas the top category is mostly filled up with students from O and A levels background. This discovery confirms the finding of the quantitative study showed in the previous chapter through Figure 8-7 and discussed in section 8.3.3. Responses from qualitative interviews are already used to create the categories of the usefulness of early education; however, now these are going to be explored in relation to secondary education.

Two students with O and A levels background stated:

- *I think a major difference was that we didn't memorise things rather tried to understand and question, now teachers ask everyone to question and to think critically, and I see my friends from FSc struggling with this concept. (Student No. 7)*
- *Students who have done O-A levels already have a habit of observing things very critically; they have this training in their education system they learn a thing by understanding the concepts. (Student No. 3)*

Two students with DAE background said:

- *I am a diploma holder, so I had an understanding, but I saw everyone else struggling, teachers don't guide what a section is and how to draw sections, and in juries, they would point out that the sections are not right. (Student No. 13)*
- *Although they never taught us how to design, they taught us how to draw, and this has helped me here in architecture. Also because of the diploma, I had some idea about architecture that what I will be doing (Student No. 43)*

It is clear by these statements that students have found both O/A levels and DAE education helpful and they rely on it for learning architecture. However, there is a difference in their usefulness, as O/A levels education has prepared students for critical thinking and self-reflection. Whereas DAE provided them with some tools and skills to be used while learning architecture. On the other hand, students with FSc background are not finding early education very helpful for learning architecture.

- *I do not think it is helping me; I mean, I understand that I could not get admission to this school of architecture if I had not gone through all those years of education. But I feel I do not remember what I learned in all the difficult science subjects. (Student No. 44)*
- *I would say the studies of Matric and FSc is not helping me to learn architecture at all. I feel if I had learned arts and social science subjects in early education, it would have helped me much better in learning architecture. (Student No. 30)*

By comparing this analysis with the explanation of learning conception in section 3.7 it is clear that FSc education instills reproductive learning methods and motivates surface-strategic learning approach in architectural learning. DAE instills reconstructive learning methods and motivates a deep-strategic learning approach in architectural learning. Whereas O/A levels instil reflective learning that has the potential to change a person. It motivates a deep-strategic learning approach in architectural learning

It is clear from Figure 9-17 that most of the students from cultivated habitus possess the intrinsic motivation and comparing this with Figure 9-3; it becomes clear that they possess reconstructive learning conception. Most of the students from oblivious habitus possess the extrinsic motivation and reproductive learning conception. However, the impact of the type of early education is even stronger on determining the learning conception as all students with O/A level type education are reconstructive learners. As it is clear from the previous discussion in chapter 5 (section Secondary Education in Pakistan) that only students with high social class are able to access this type of education, a direct relation the social class and learning conception can be observed.

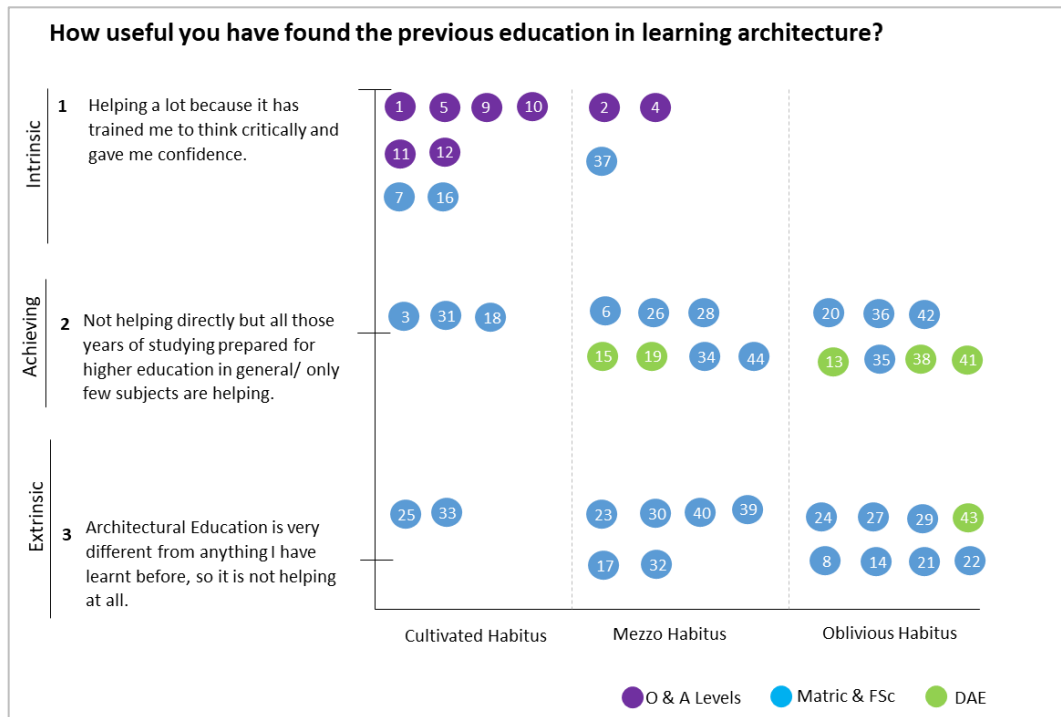


Figure 9-17: Students’ perception of the usefulness of early education with their secondary education

9.9.6 Curriculum boundary

Curriculum Boundaries is a concept associated with knowledge codes (section 3.9.1) and it investigates students’ perception of the importance of allied subjects in learning to design. In this study, it is investigated in the interviews through two questions discussed below. As shown in Figure 9-18 and Figure 9-19, categories of students’ answers are created for each of these questions, these categories are based on examples of students’ responses in tables

D-15, and D-16 in Appendix D. Each students' position against these categories is also identified in these Figures (9.18 & 9.19).

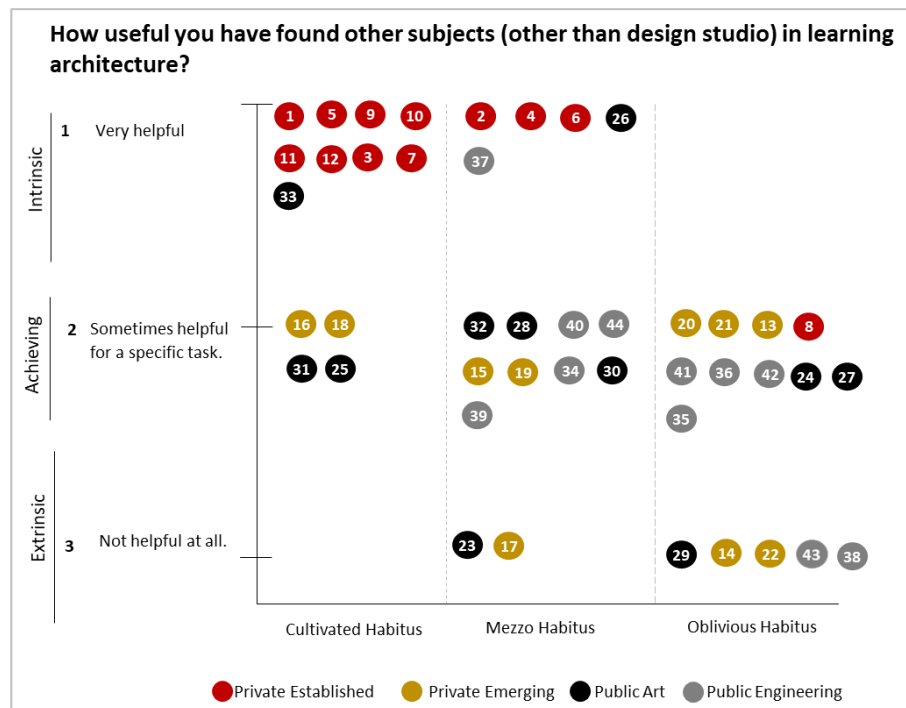


Figure 9-18: Students' perception for the usefulness of allied subjects

The two questions investigating students' perception about learning the allied subjects are; how useful they have found other subjects in learning design, and how often they take inspiration from these subject areas. For both these questions, students' answers are identical; that is why they are discussed here together.

The majority of students from the cultivated habitus group responded that they have found allied subject areas very helpful and they always try to incorporate these subjects in design, showing intrinsic motivation. Some students from the mezzo habitus group also responded the same, but most of them responded that they find allied subjects only helpful in some cases, and they try to incorporate these in design only if teachers demand it. These students are showing achieving motivation; most students from the oblivious habitus group also show achieving motivation. However, some of them responded that they did not find allied subjects very helpful, and they never try to incorporate them in design projects, showing an extrinsic motivation. Quotes from students confirming these responses are given

below, the numbering of these quotes concurs with the categories these students belong to, as shown in Figures 9.18 and 9.19.

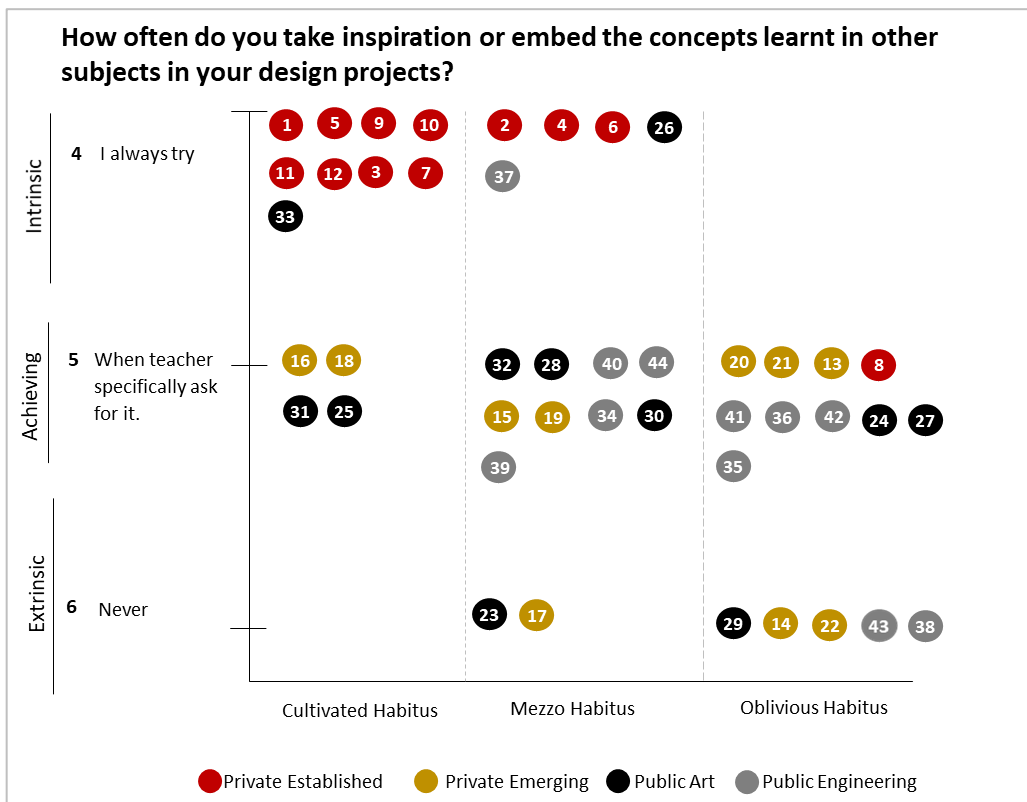


Figure 9-19: Students' response for incorporating allied subjects in design projects

1. *Yes, I think they (allied subjects) are very helpful, especially history, I think it helps us to develop an understanding of the profession and to understand where we stand in this world and where to move forward from here. I find technical subjects like structures and environmental design a bit boring and difficult, but I know they are important so I try to give them as much attention as I can. I try to implement those concepts in my design projects too because now I understand that in order to make a building work properly, they have to work on every front. (Student No. 39)*
2. *Sometimes allied subjects are helpful for particular tasks, like the structural design of the buildings or environmental aspects of buildings, so when I need to find a solution for some specific issues, I try to incorporate the subjects I have learned in theory subjects. Otherwise, you know architecture is tough on its own why would I make it more complicated (Student No. 8)*
3. *Not really, it is hard enough to understand the concept of spaces and plans, sections, and elevations. Never thought about extra things. And the focus always remained on design because if you fail in design, then you stay in the previous year, so a year gets wasted. Plus, according to credit hours, allocation design is the most important subject. (Student No. 23)*

4. *Yes, I think they are quite helpful. The concepts and materials we learn about in structures and construction help us understand the building process and what type of materials we should use in our buildings. It also helps to think about the most suitable structures to propose building designs. (Student No. 26)*
5. *I am not sure about that; I mean whatever we learn in other subject areas we rarely implement that in design unless teachers ask to do it specifically. I try to incorporate some things I have learned in other subjects in design, but it is very difficult to do on my own unless teachers provide guidance, particularly for that subject area. (Student No. 31)*
6. *I think I have found the theory subjects most difficult to understand, what is their relevance why are we studying this and what are we expected to learn from it, I never understood that. (Student No. 29)*

9.10 Collective findings

In the previous section, students' responses to different questions are analysed in relation to their habitus groups. In this section, the important findings from these questions are discussed. Most students from the cultivated habitus group show intrinsic motivation for all questions. Whereas students from the oblivious habitus group mostly show extrinsic motivation. Responses of students from the mezzo habitus group are spread over the three motivation levels for different questions.

Some prominent findings include:

- No student from the oblivious habitus group got admission architecture as their first choice (Figure 9-4).
- The majority of students from all habitus groups said that they enjoy working on design projects (Figure 9-6).
- Students from the oblivious habitus group think the least about their strengths and weaknesses in learning architecture. (Figure 9-8, Figure 9-9)
- The majority of students from all three habitus groups joined architecture because they had a perception about the field (its artistic/engineering field) and thought it would suit their personality, without any investigation into the profession (Figure 9-10). Also, the majority of students from all three habitus groups responded that they are trying to make sense of architectural learning requirements (Figure 9-11).
- The majority of students from the mezzo habitus group as compared to the other two responded that their perception of architecture changed with the time spent in the

school. This shows that these students are more open to change and transformed with their time spent in the school (Figure 9-12).

- A vast majority of students from the cultivated habitus group as compared to other groups responded that following teachers blindly is not a good idea (Figure 9-13).
- The majority of students from the oblivious habitus group as compared to the other two responded that design jury is an unfair practice (Figure 9-15).

9.11 Learning approaches of students

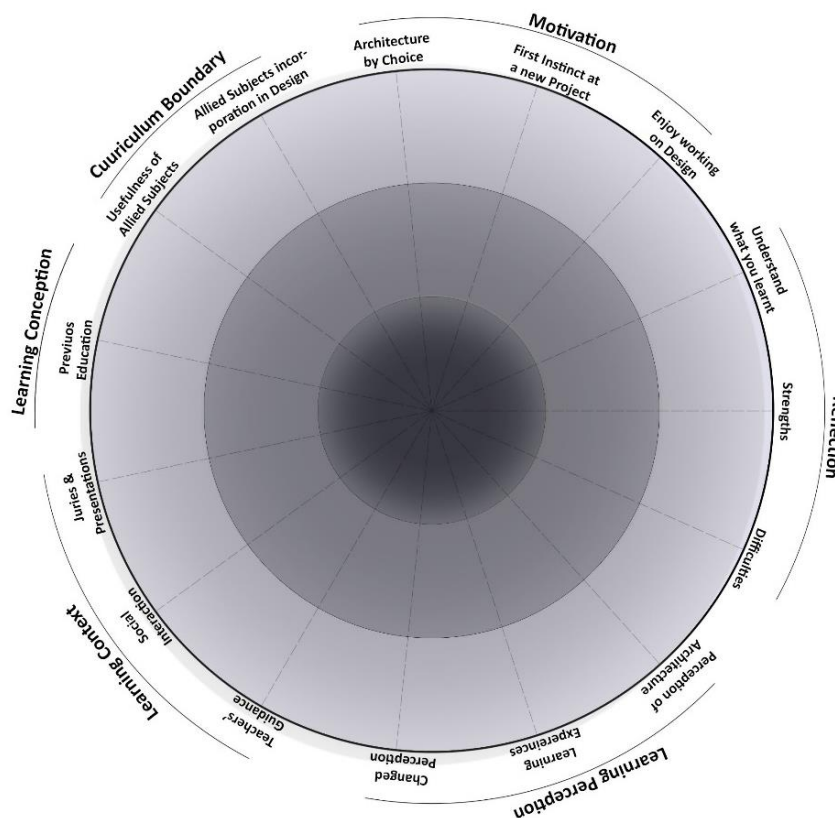


Figure 9-20: Parameters of students' learning approaches

Figures 9.4-9.19 provide students answers to different questions, however, it does not inform the learning approach of each student. For this purpose, students' responses are mapped collectively on parameters identified in Figure 9-20 (adapted from Iyer, 2018). These parameters are based on concepts investigating students learning approaches; it also maps the questions associated with them and were part of the semi-structured interviews.

Moreover, there are three zones in the circle representing the three learning motivations and against it three learning approaches.

Answers showing intrinsic motivation falls in the darkest and central zone, achieving motivations falls in the second zone, and extrinsic motivation falls in the outer zone. Based upon this principle, students' responses are mapped on these parameters shown in the figures in Appendix D, under different habitus groups (Figures D1 to D7). Each line represents the answers of a student, and the zone it falls in signifies the learning motivation of that student. The zone in which maximum answers lie shows the motivation and learning approach of that student. For example, if a student has the most answers in the inner deep zone, they possess intrinsic motivation and a deep learning approach.

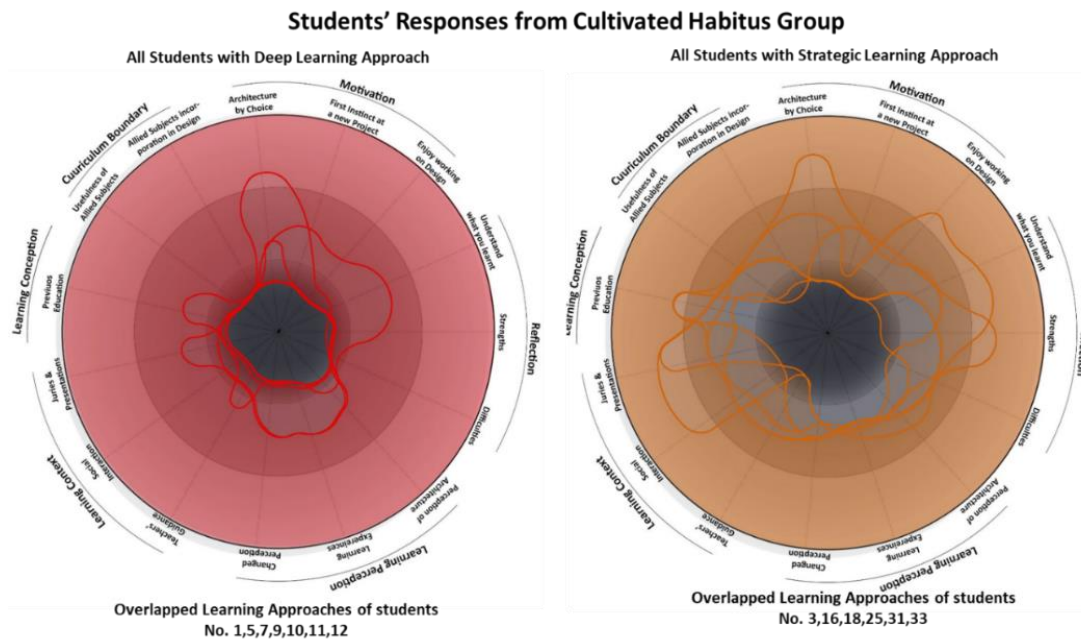


Figure 9-21: Overlapped responses of deep and strategic learning approaches by students from Cultivated Habitus Group

Figures D1 to D7 in Appendix D provide the learning approach of each interviewed student, however, the focus of this study is to explore the learning approaches of different habitus groups and not individual students. For this reason, by overlapping the responses of each student, Figures 9.21, 9.22, and 9.23 represent the range of learning approaches of students from different habitus groups. The important factor to observe in these figures is not the

individual lines representing the learning approach of specific students, but the placement of them collectively showing the dominant learning approaches of students in each habitus group.

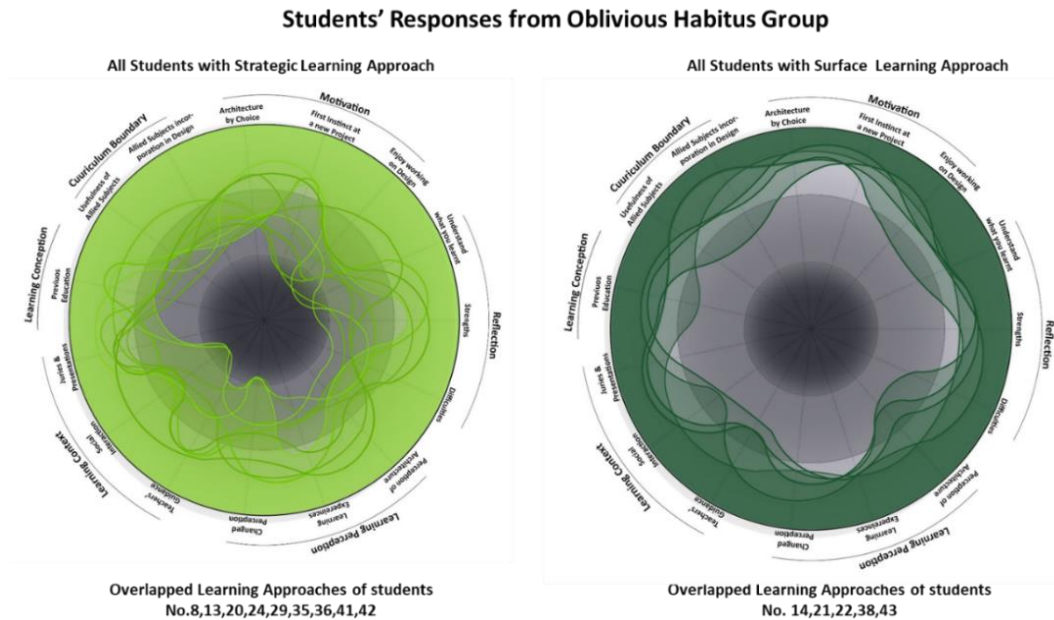
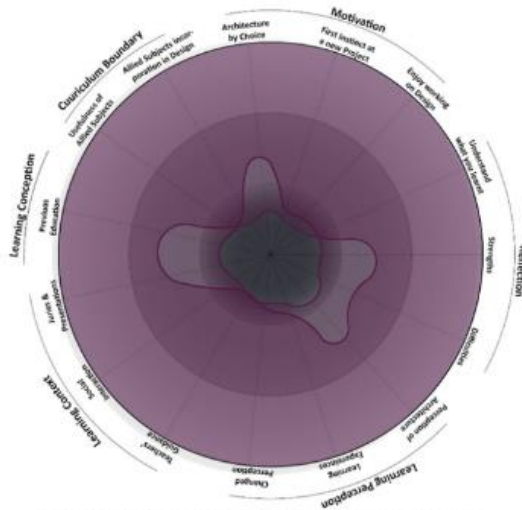


Figure 9-22: Overlapped responses of strategic and surface learning approaches by students from Oblivious Habitus Group

In the cultivated habitus group, there are no students with a surface learning approach, and the largest number of students with a deep learning approach lies in this group as shown through red lines in Figure 9-21. Orange lines in the Figure 9.21 represent students with strategic learning approaches in the cultivated habitus group. These lines mostly fall in the achieving motivation zone but touching the outer extrinsic and inner intrinsic motivation as well for some questions, signifying strategic learning approach. Similarly, light green lines in the oblivious habitus group (Figure 9-22) and dark pink lines in the mezzo habitus group (Figure 9-23) show the strategic learning approaches of students. These three figures show that majority of students from all three habitus groups contain a strategic learning approach. However, by comparing these three groups of lines it can be observed that there is a difference between the strategic approaches of students from different habitus groups.

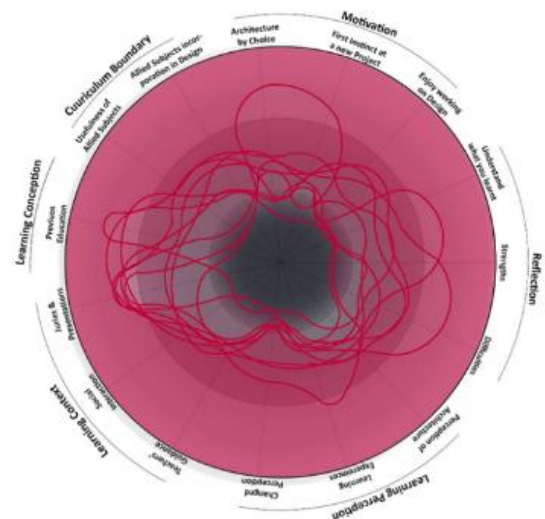
Students' Responses from Mezzo Habitus Group

All Students with Deep Learning Approach



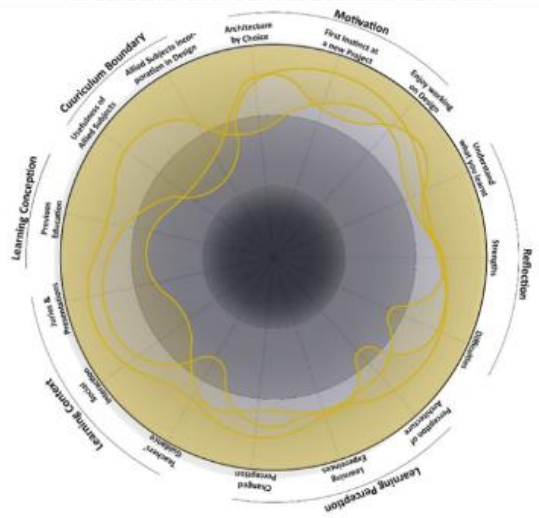
Overlapped Learning Approaches of students
No. 2,26

All Students with Strategic Learning Approach



No. 4,6,19,23,28,30,32,34,37,39,44

All Students with Surface Learning Approach



Overlapped Learning Approaches of students
No. 15,17,40

Figure 9-23: Overlapped responses of deep, strategic, and surface learning approaches by students from Mezzo Habitus Group

It is clear from the figures that the majority of students from cultivated and mezzo habitus groups possessing strategic approach gave many responses that fall in the deep learning approach. Whereas most students from the oblivious habitus group possessing this approach gave responses that fall in the surface learning approach. Therefore, the cultivated and mezzo habitus group possesses a deep-strategic approach whereas the oblivious habitus group

possesses a surface-strategic approach. Moreover, there are no students in the cultivated habitus group with a surface learning approach, and there are no students in the oblivious habitus group with a deep learning approach.

9.12 Role of Institutional habitus

Similar to section 9.10 where the collective findings were discussed in relation to habitus groups, in this section collective findings are discussed in relation to institutional habitus groups. Some of the prominent findings are stated below.

- No student from the public engineering university group joined architecture by choice. Whereas the majority of students from the Public Art university group joined architecture by choice and had a better idea about the complexity involved in learning architecture (Figure 9-4).
- No student from the public engineering university group has an intrinsic motivation at the beginning of a new project (Figure 9-5).
- Students from the private established and public engineering university group performed significantly better than the other two university groups for all three questions of reflection (*Figure 9-7, Figure 9-8, Figure 9-9*).
- Students from the private established group have a much positive perception about social interactions as compared to all other three university groups (*Figure 9-14*).
- Only the students from private established university groups have found their earlier education useful in learning architecture (Figure 9-16). But the major reason for this is the differences in the type of early education, O and A levels education is found much more useful as compared to other types of secondary education (Figure 9-17).
- Out of all the students who have found allied subjects useful and try to incorporate it in design learning, a vast majority of them belong to private established university group (Figure 9-18, Figure 9-19).

Learning Approaches of students from different University Groups

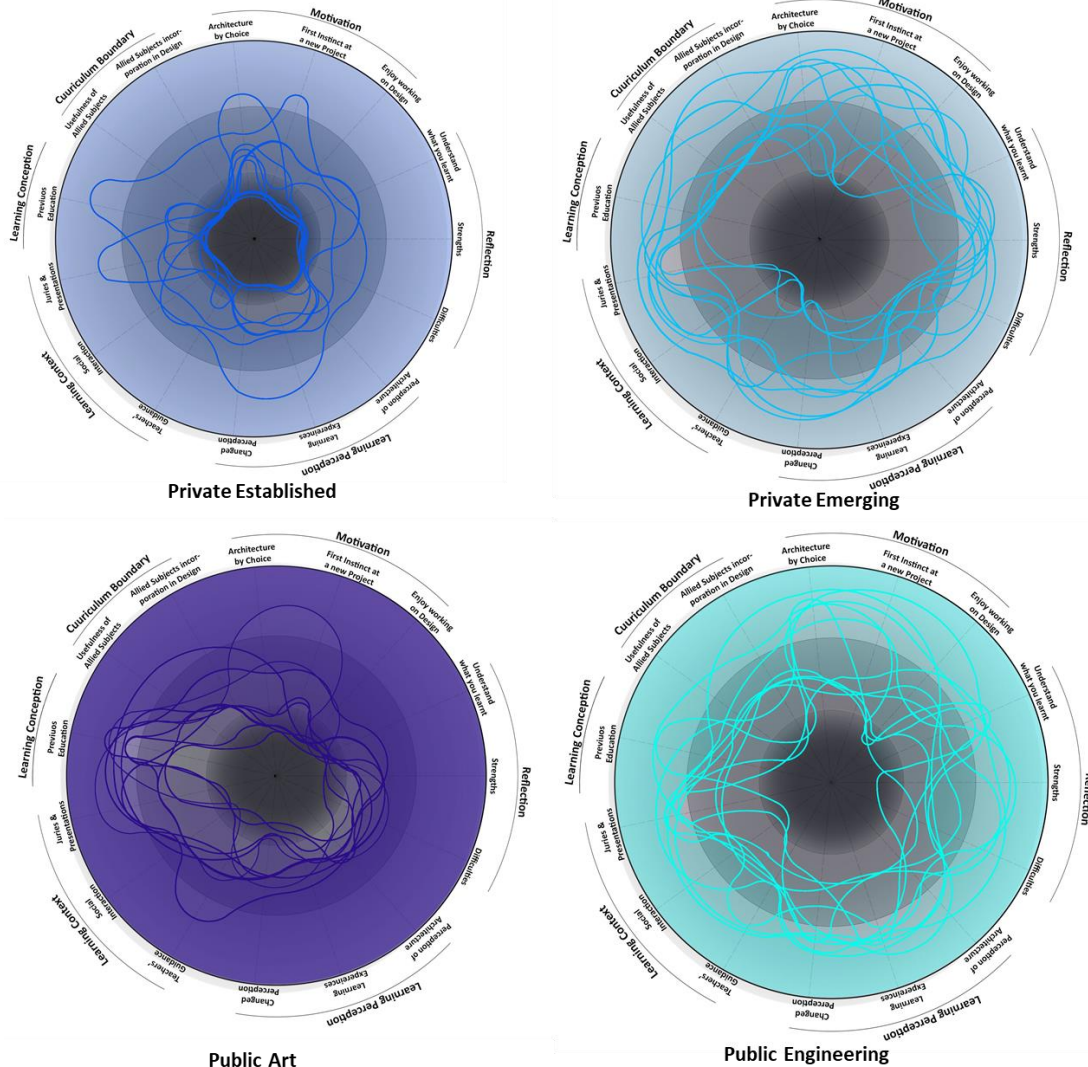


Figure 9-24: Learning approaches of students from different institutional habitus groups

By combining the learning approaches of students from different institutional habitus groups together (appendix D, Figures D1-D7), Figure 9-24 demonstrates the combined learning approaches of students from these groups. This figure shows that almost all students from private established university groups possess a deep learning approach, with very few outliers. Students from private emerging and public engineering universities do not prominently show any single type of learning approach. However, the public engineering university group shows more responses towards the deep learning approach as compared to private emerging, as more lines are touching the central darker zone of the parameters. The most interesting finding is from the public art university group; here,

most students show a strategic learning approach as the lines are touching the inner and outer zones of the parameters. However, the interesting phenomenon is that these lines are skewed away from the reflection and towards the learning conception. This shows that the majority of students from this university group show good reflection, and they think that their previous education is not helping them in learning architecture.

9.13 Summary and conclusion

Based on Figure 9.1, Table 9.5 provides a summary of the findings in this chapter.

Factors explored in the chapter.		Brief Summary
1	Exploration of Habitus	Habitus groups are formed based on students' responses in the semi-structured interviews exploring their life history Three groups of habitus are formed, cultivated, mezzo, and oblivious habitus group.
2	Exploration of learning approaches in relation to habitus groups.	Students' learning approaches are explored through 6 factors based on the concepts of deep and surface learning approaches and knowledge codes. Students' responses are mapped on the parameters set on the 6 factors and the learning approach of each student is identified. Learning approaches of students from each habitus group are combined to explore the combined results.
3	Role of institutional habitus in learning approaches.	Learning approaches of students from each institutional habitus group are combined to explore the combined results.
4	Some important findings.	Most students from the cultivated habitus group show a deep learning approach, whereas most students from the oblivious habitus group show a surface learning approach. Most students from established university groups show deep learning approaches. In the other three groups, students do not show a single type of learning approach and are divided into the deep, strategic, and surface learning approaches.

Table 9.5: Summary of the chapter.

This chapter indicates that habitus has a deep impact on the learning approaches of students. It defines students' perception about architecture before joining the school, their motivation to learn, their perception of the learning environment, and the way they deal with knowledge accumulated before joining the school of architecture, and the knowledge gained in the school.

In the previous chapter, the relationship of students' cultural capital to their learning experiences was explored, in this chapter, the relationship of students' habitus with their learning approaches is explored. The next chapter will explore how these four aspects work together to explore how students' social background (explored by their cultural capital and habitus) determine their learning experiences, approaches, and the chances of success in the schools of Architecture in Pakistan.

CHAPTER TEN
Summarised Analysis and Discussion

10 Summarised Analysis and Discussion

10.1 Introduction

To explore the impact of students' social background on architectural learning, previous chapters have investigated the factors shaping personality dispositions and learning experiences and approaches. The following is a summary of the factors explored:

- Detailed literature analyses on the role of social background in educational achievement and on students' learning approaches, informing a theoretical framework for the current study
- Detailed analyses of the literature on the field of architectural education in the global context and on the practice of architectural education in Pakistan, focusing on students' social background and investigated from the teachers' perspective
- Exploration of the inherent characteristics of the schools of architecture involved in the study in terms of institutional habitus
- Exploration of students' cultural capital and learning experiences in the school of architecture (the relationship between these two factors was explored both alone and in relation to the institutional habitus of the schools)
- Investigation of students' habitus and learning approaches in the school of architecture (the relationship between these two factors was explored both alone and in relation to the institutional habitus of the schools)

Cultural capital, habitus, learning experiences, and approaches are the four primary factors considered in this study. The relationship between cultural capital and habitus is discussed in Chapter 9 (section 9.5), but it is not explored in detail. In addition, there is no discussion of whether these factors work together to shape the learning experiences and approaches of students in the school of architecture. This chapter explores the relationship between these four factors through the themes emerging from the quantitative and qualitative data analyses described in the previous chapters.

10.2 Social class and education

As discussed in Chapter 2 (section 2.11), cultural capital and habitus are employed as indicators of social class to explore its role in the educational success (Bourdieu, 1984). However, most studies have used only one of these concepts. In this study, both concepts are employed and investigated using quantitative and qualitative data. The questions asked in both data collection processes were developed on the basis of the literature review, as cited in previous chapters (sections Cultural capital investigation and Habitus Investigation in literature). Figure 10.1 details the questions asked in both processes, and the size of the circle signifies the importance of the question for the data analysis.

An exploratory factor analysis (EFA) of cultural capital revealed that parental education was the key determinant of a student's level of cultural capital (section 8.2.2). Thus, mother and father's education are depicted by a larger circle. This is in line with the pilot study, where teachers cited *family values* as the primary influence on cultural capital (section 5.10). In the next stage, qualitative data analysis was conducted to investigate the factors shaping students' habitus and it is explored that how these factors relate to the aspects shaping up cultural capital to understand a relationship of these.

The qualitative investigation of habitus involved categorising the questions into five groups, as discussed in Chapter 9 (section 9.6.6). Each group included one question with a more direct relationship with habitus than the others, thus the answer given to this question was strongly correlated with the final categorisation of the student's habitus (see Appendix D, Table D-1). For the early education group, 'cultural activities' was the most important factor. Explored using quantitative data, this was an important factor in shaping cultural capital. In the views of the parent group, the education of parents was the most important factor. The education of both mothers and fathers was cited as the most important factor in shaping students' cultural capital, as these had the highest extraction value in the EFA (Table 8.4). This overlap shows that cultural capital and habitus are intrinsically related. This discovery is a confirmation of the finding described in Chapter 9, as Table 9.2 shows that almost all students with cultivated habitus also have high cultural capital, with very few outliers.

As shown in Figure 10.1, along with parents' education, parents' views were also found to be a key influence on students' development of habitus. Similarly, along with cultural activities in early schooling, satisfaction with these activities was important. This finding suggests that an understanding of the factors shaping the decisions is as important as the possession of these factors, or habitus. Possession of high cultural capital indicates that one has tastes legitimised by the culture to which one belongs. However, possession of cultivated habitus indicates an understanding of this legitimisation and the use of it to make choices and take actions. Thus, habitus is the operationalisation of cultural capital. This is in line with Gaddis (2013), who identified that students utilise cultural capital for educational attainment by operationalising their habitus.

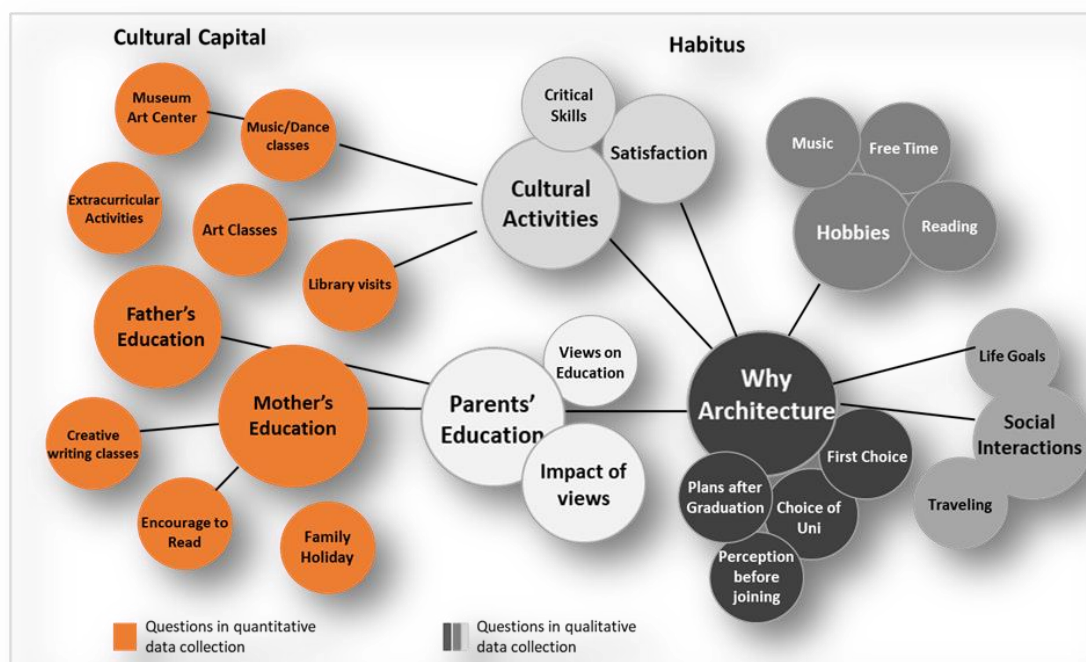


Figure 10-1: Factors considered in the investigation of students' social background'

There is a large body of research suggesting that habitus plays a vital role in students' learning aspirations and decisions (Dumais, 2002; Lehman, 2007 & 2012). This shows the importance of reflection and critical understanding of the world and suggests that students with cultivated habitus have a higher level of reflection. In effect, their social background has given them an

inherent personality disposition that encourages them to question and reflect on the reality around them.

Another factor in determining habitus was the students' reason for studying architecture. All those for whom architecture was their first choice were found to possess cultivated habitus (Table D-1; Appendix D). Hence, students with cultivated habitus were more determined in relation to their goals. This is in line with Lane (2002), who describes habitus as a process by which practical expectations of the social world become part of a person's inherent dispositions, helping them to make decisions that are neither conscious nor unconscious, but rather practically oriented towards a goal. This is in line with the teachers' perceptions of students' learning abilities in relation to social background, as explored in the pilot study (Chapter 5), as most felt that the students' social background shaped their personalities and 'thinking abilities', which affected how they learned (section 5.9.1).

This study focuses on the development of cultural capital through social status and how this influences habitus and decision-making. However, the qualitative analysis revealed that social capital also shapes students' habitus. As discussed in Chapter 2 (section 2.9.1), social capital refers to trust networks that individuals can draw upon for social support (Giddens, 2000). The impact of cultural capital on educational attainment is more focused in literature than social capital. Bourdieu (1984) also mentioned that in the field of education, cultural capital is the most required form of capital. However, there is also a significant body of literature on the impact of social capital on educational achievement, and the conclusion is that this strongly influences one's chances of success in education (Helliwell & Putnam, 1999; Grenfell, 2009; Plagens, 2011). In this study, several students mentioned the impact of social capital on educational achievement. As a student from the *oblivious habitus* group said,

I think a lot of students from big cities are confident in the school of architecture as they either personally know architects or at least are aware of their role in society. They have lived in houses designed by architects or know someone who hired an architect. So, they understand the practice much better than a student like me, who [had] never even heard about this profession before.

One student mentioned that those with more social connections would be much more successful in architectural practice as they had 'contacts' who could help them to win projects, suggesting that this also made these students more confident in their learning. Two students

from different schools acknowledged that social contacts had helped them to excel in their studies. The fathers of these students were construction contractors who worked with architects, and the students said that they had close contact with the work of architects and could even seek help if needed. In addition, three students said in interviews that their parents were architects, which has strong implications for both cultural capital and social capital. However, since social capital was not a focus at the data collection stage, there was insufficient evidence to investigate its implications across the different student groups.

This study concludes the role of social class by explaining that social class defines the cultural capital of students in Pakistan. Students from higher social class mostly possess high cultural capital by getting familiarised with the dominant culture and parents' education plays a crucial role in this. This high cultural capital mostly transforms into cultivated habitus as the dominant culture they are exposed to become a part of their personality dispositions and dictates their future actions. This way class plays a role in educational achievements. The influence of social background on learning experiences and approaches was explored using the quantitative and qualitative data obtained, and the conclusions are discussed in the following section.

10.3 Social class and learning experiences and approaches

The previous section discussed the embodiment of social class in cultural capital and habitus that enables students to perceive the realities of learning and take action accordingly. The inherent disposition of the institute in which the student is working is also highlighted in the literature as affecting learning experiences. This disposition mediates the impact on the individual of the institute's practices (Reay, 1998). Many studies have explored the impact of institutional habitus on students' learning practices, and there is a consensus on its importance (Reay et al., 2001; Thomas, 2002; Atkinson, 2011). The impact of institutional habitus was explored in this study in relation to the four groups of universities described in Chapter 7. These four groups are then used to identify the impact of institutional habitus and the relationships between cultural capital and learning experiences and between habitus and learning approaches. These relationships were investigated using a questionnaire survey and semi-structured interviews. The emerging themes indicated that some aspects of the learning

experiences and approaches were most strongly influenced by social class, as identified in section 8.5, shown in Figure 8.24, and discussed in section 9.10.

In this section, these aspects are analysed using both sources of data and in relation to aspects of social class (cultural capital and habitus) and institutional habitus, identifying how these variables work together to characterise the variety of learning experiences and approaches.

10.3.1 Access to architecture

As discussed in Chapter 2 (section 2.16), much of the literature states that a student's social background significantly influences their choice of profession (Van De Werfhorst et al., 2003; Ball et al., 2010). It also affects their ability to access higher education (Lehmann, 2007; Lynch & O'Riordan, 1998; Noble & Davies, 2009; Pugsley, 1998; Thomas, 2002).

This study provides supporting evidence for this claim, with both quantitative and qualitative data indicating that students' social background has a profound impact on their choice of profession. In the questionnaire survey analysed in Chapter 8, 48.5% of students from the 'high cultural capital' group said that they had chosen architecture because they were attracted to the profession, while only 24.1% of students from the 'lower cultural capital' group gave this response (Figure 8-5). Similarly, in the qualitative data analysed in Chapter 9, most students from the 'cultivated habitus' group responded that architecture was their first choice as a profession and they had chosen the profession by their own will, thus suggesting intrinsic motivation (Figure 9-4). In contrast, students from the 'oblivious habitus' group said that they had chosen architecture after researching the earning potential in this profession or simply on the advice of another person, thus showing achieving and extrinsic motivation. Moreover, the impact of cultural capital on the choice of field was indicated by the majority of students who mentioned having an artistic hobby also mentioning that architecture was their first choice (Figure 10.1). Hobbies have a strong impact on students' habitus, and students who showed interest in more skilled and artistic hobbies expressed more positive perceptions of architecture as a profession.

It is clear from both sets of data that students who possess cultural capital and cultivated inherent personality dispositions are more confident when choosing their professions. They choose the profession on their own initiative and because they liked it, and therefore they

possess the intrinsic motivation and are eager to learn, employing deep learning approaches. Moreover, they are ready to face the challenges in school and thus have more positive learning experience than their peers. In contrast, students without dominant cultural capital tend not to cite architecture as their first choice. They are less eager to learn and more likely to employ surface learning approaches. As they are not ready for the challenges that arise in the school environment, their learning experience tends to be negative. In summary, a student's reasons for choosing the school have a direct impact on their learning approaches and experiences.

The school's institutional habitus plays a very important role in the student's choice of institution and, ultimately, in their learning approaches and experiences. As discussed in Chapter 4 (section 4.7.5), the school's admission policy affects its students' performances (Salama, 2008). It also impacts the decision by students of different social backgrounds to enrol in architecture. The schools in this study have different admission criteria. Three of the university groups – the public engineering group being the exception – uses interviews and special tests to assess their admissions. Students enrolling at these schools must have a pre-existing interest in architecture, and they must prepare for admission tests. As a result, they are often more familiar with what to expect in architecture schools when they begin their studies. As private established schools have the most challenging admission tests, students at these schools typically have the most knowledge about the subject. However, students joining public engineering schools are often entirely unaware of the culture of architecture and are assigned the discipline by the university's central admission system. Most students at these schools wanted to be engineers but were sent here because engineering disciplines have a higher bar for enrolment that they could not reach.

Public perception of these schools also plays a role, as students who are attracted to architecture tend to be inclined towards the artistic side of it. These students prefer to attend the schools in the 'public art' or 'private established' university groups. This is evident in Figure 9-4, where almost all the students studying architecture as their first choice belong to these two groups. These schools have a public reputation for producing 'starchitects' (section 7.7);

and as a result, many students who are attracted to the profession want to attend these schools.

This variation in the admission systems and public perceptions of these schools result in differences between their students' learning experiences and approaches. It comes as no surprise that private established schools perform best for learning experiences (Figure 7-4, Figure 7-5) and approaches (Figure 9-23), as these institutions have the highest proportion of students with cultivated habitus and with architecture as their first choice of profession. However, despite its admission policy, the public engineering group did not perform worst for learning experiences and approaches, as discussed in Chapter 8 and 9 (sections Discussion and Collective findings). Instead, the private emerging schools group was at the bottom. Several factors are found in data to explain this. Public engineering universities are ranked very highly, with challenging admission requirements. Though the majority of their students are unfamiliar with architectural habitus, they are hard-working and high-achieving, able to compensate for their lack of familiarity by working hard to understand the culture. Many students in this university group expressed feelings that confirmed they were eager to learn. One student said the following in their interview:

I had no idea about architecture before [enrolling at] the school, and I was really unhappy in the beginning as I could not understand what to do; but I kept on trying as there is no other way, you know. It's not like I was going to quit my studies, so I had to find a way.

In contrast, most students in the private emerging schools blamed their teachers for any negative learning experiences they had had in school. One interviewee said that the students were not serious because they only attended these schools as they had to do something in life and they had failed to obtain admission to the public universities. These schools were found to be very lenient with their admission policies, and many students who had not been admitted anywhere else had found themselves here, without any understanding of the field. This explains the prevalence of surface learning approaches in these schools, as noted in section 9.11 (Figure 9-23). Moreover, the pedagogic claims differ from the practices in these schools, as indicated by the students' perceptions presented in Chapter 7 (section 7.9). The

students were dissatisfied with the learning environment and thus described the least positive learning experiences.

10.3.2 Starting a new project

As discussed in Chapter 4 (section 4.6.1), the pedagogic practice of the design studio requires students to find the solutions to their architectural problems (Salama & Wilkinson, 2007). Starting a new project can be a major threshold point for many students as discussed in the literature (section 4.7.4). For this, they must be independent learners (Al Maani, 2019). The students were asked – in the survey and in the interviews – about their experiences of starting a new project. This question elicited one of the most diverse ranges of responses from the students. In the questionnaire survey (discussed in Chapter 8), 85% of the students from the high cultural-capital group said that they felt confident at the beginning of a new project, with just 45.6% from the lower cultural-capital group giving this response (section 8.3.4, Figure 8.10).

In the qualitative interviews, most students – irrespective of their habitus group – said that they enjoyed working on the design projects (section 9.9.1, Figure 9-6). The students were asked about their instinct at the beginning of a new project, and most respondents in the cultivated habitus group said that they took the initiative, went to the library, and began conducting research, thereby showing intrinsic motivation. In contrast, most students in the oblivious habitus group responded that they attempt to follow the teachers' instructions and to complete weekly tasks, thus suggesting extrinsic motivation. This clearly shows that students' social background affects their ability to begin new projects. Students with dominant cultural capital and cultivated habitus are more confident and more inclined to take the initiative, representing a deep learning approach. In contrast, students without dominant cultural capital and with oblivious habitus are much less confident, preferring to follow their teachers' instructions and thereby employing a surface learning approach.

In the quantitative exploration of students' confidence at the beginning of a new project, institutional habitus was found to have a weaker impact than cultural capital (section 8.4, Figure 8-18). The higher cultural capital students in all university groups gave more positive responses, while the lower cultural capital students were more likely to be negative. However,

most students in the private established and public art university groups said that they attempt to take the initiative and envision the whole project, showing intrinsic motivation (Figure 9-5). This may be due to the different types of projects taken up in the different schools (as discussed in Chapter 7, section 7.6). The schools in the public art and private established university groups tend to set small-scale projects with a focus on social diversity and artistic expression. The pedagogies of these schools encourage students to research and to think independently, rather than completing tasks by rote and relying on teachers for guidance and direction. Where the other two university groups prefer large-scale projects and complex design.

This analysis reveals that the students' level of confidence around new tasks is primarily influenced by their social background, while the direction they take for a task is very much dependent on their school's habitus. As private established and public art schools are focused on grooming individual personalities and critical thinking, they inspire their students to take the initiative, rather than following instructions.

10.3.3 Public display of habitus

In the literature, the architectural review is often considered the most important activity in the school of architecture (Webster, 2005). It is identified as the legitimation process, with a focus on the social acceptance of students in the world of architecture (Nicol and Pilling, 2000; p-259). For this reason, in an exploration of the impact of students' social background on their learning, it was inevitable that students' experiences of the architectural review would generate the most diverse range of responses. As Webster (2005) identifies, architectural reviews put students' habitus on display.

In the quantitative survey, 63% of the students in the lower cultural capital group said that the critiques were not respectful and constructive, while 83.6% of those in the high cultural capital group said that they were (Figure 8-9). This question elicited a wider variation in responses from the different cultural capital groups than any other question asked in the quantitative survey (Figure 8-24). Similarly, in the qualitative study, most students in the oblivious habitus group said that the juries were a very frightening experience, and they did not feel comfortable being judged on their speaking and presentation abilities.

The students' experiences of the architectural reviews also play a role in their learning approaches, as they are uncomfortable presenting their work and focused on 'getting through' the process, rather than seeing it as a learning experience. One student said, 'it is a terrifying experience and I am always happy when it is over. I don't think we learn anything from the way we are being judged in the juries. This response was in line with the criticisms of the architectural review process found in the literature. Cuff (1992) writes that many students claim to have never had a good crit, while Dutton (1991) labels this practice a tool of oppression. This is even more evident in this study, where the students with dominant cultural capital and cultivated habitus had a significantly more positive attitudes towards the experience of architectural review. This is also in line with Stevens (2002), who writes that, for students whose habitus is closer to architectural habitus, the review becomes a dialogue between two equals.

The experiences of architectural review for the students in this study were also very dependent on their English language skills. As mentioned in Chapter 5, English is considered a language of culture and social status in Pakistan (section 5.4), as only those students from the upper class can afford early education that provides these language skills. The official language of the universities is also English, which causes lower cultural-capital students who cannot communicate well in English to suffer when presenting their work. In the pilot study described in Chapter 5, the teachers discussed the impact of English language skills on a student's ability to present their work in reviews. They explained that students from the higher social class – who possess dominant cultural capital – are more confident in their reviews (section 5.9.3).

Many students from the oblivious habitus group expressed negative sentiments during their interviews about the way in which they were judged and marked in the reviews. They said that students with better communication skills and stronger command of the English language were judged less harshly on their work. In fact, their work could be of a lower standard and they would still be awarded better marks, as they were able to tell 'good stories' about their work. As one student mentioned in the interview, 'it definitely matters how you talk. Students who can speak confidently in English and [explain the] concepts behind the design in an

effective manner get a lot of benefit in marking'. This is in line with the literature on the major critiques of the review practice, as discussed in section 4.9, which concludes the reviews is merely a practice for legitimation, assessing who is 'worthy' of joining the architectural community.

However, many students said that language and speaking skills were just one aspect and no student could earn good marks solely on this basis – though it does provide an advantage. Students who cannot perform well in review presentations know that they must show extra work on their sheets so that teachers can see their efforts.

The students' social background has a very strong relationship with their experiences of presentations and reviews. However, the schools' institutional habitus also defines how the students' social background comes into play. In the quantitative study, the lower cultural-capital students in the public art university group described the least positive experiences of the critiques. This contrasts strongly with other aspects of these schools, as their pedagogy is based on social inclusion and diversity. In their admission systems, most of these schools have reserved seats for students from remote areas of Pakistan. Students at these schools also gave the most positive responses to queries about the conducive environments of their schools and their instructors' acceptance of diverse thinking.

In this context, the students' negative experiences of the reviews are surprising. Many of the interviewees from these schools said that the reviews were difficult because the students were being judged on their speaking abilities. As one student said, 'Coming from a small town, the toughest thing I have found in this school is [interacting] with people. I feel like I am being judged all the time, and [this is most difficult] in juries. The demographic diversity enforced by the admission policies may be the reason for this variation in experiences of the critiques at these schools. However, it remains unclear why teachers – who accept social diversity and diversity of thought during one-to-one interactions – are not creating more accepting environments in the reviews. Nevertheless, this finding that reviews are only a positive experience for cultivated habitus students is very much in line with Webster (2007), who concludes that these students are considered to possess 'architectural habitus' and are more likely to be well received by the reviewers.

The causes of the greater struggles of students with lower cultural capital and oblivious habitus are discussed further in the following two sections. There is also an exploration of issues relating to these students' critical thinking and reflective abilities and their relationships with their teachers.

10.3.4 Critical thinking and reflection

Critical thinking ability is very important for the study of architecture, as discussed in Chapter 4 (section 4.6). The problem-based nature of learning in the design studio requires critical thinking (Barker, 1994), as students need to be independent learners (Maani, 2019). Clune (2014) observes that critical thinking and reflective practice are vital for learning in the design studio, and there is much research on the importance of reflective practice (Schön, 1983, 1985, and 1987; Roberts, 2009).

In this study, the quantitative survey provided insights into students' perceptions of their personal performance in the studio (Figure 8-10). However, it did not reveal whether there was a relationship between understanding of one's own performance and one's cultural capital group, which could give insights into critical thinking skills and reflective practice. However, the qualitative interviews provided deep insights into students' reflective practice and critical thinking abilities. Most students in the cultivated habitus group said that they reflected on the importance of their design projects and what they had learned from them, showing strong reflective and critical thinking and a deep learning approach. In contrast, some students from the mezzo and oblivious habitus groups said that they had never thought about this. Many students in these two habitus groups also responded that they had never thought about their strengths and weaknesses when learning to design, indicating weak reflection and extrinsic motivation and a surface learning approach.

Most students with cultivated habitus asserted the importance of allied subject areas and mentioned that they attempted to incorporate the learning from other subjects into their design projects, thus suggesting critical thinking ability and the intrinsic motivation to learn. In contrast, the vast majority of students from the other two habitus groups said that they only did so if teachers specifically asked for it, indicating extrinsic motivation. This finding is line with the Bernstein (1971) concept of integration and collection codes, where students

who integrate their knowledge gained into different subject areas are said to possess 'integration codes'. As shown in the detailed analysis presented in Chapter 3 (section 3.10), the possession of integration codes allows students to develop deep learning approaches.

Teachers' perceptions of their students' critical thinking abilities, as discussed in the pilot study (Chapter 5), are supported by the findings from the quantitative and qualitative data. Many teachers said that most students from the lower social classes had an early education in which they were never encouraged to think and question, but rather to listen and learn (section 5.9.3). As a result, when they were asked to engage in dialogue and to think independently, they were 'blank'. The students' learning conceptions, as explored through the qualitative interviews, support this notion, with the students from the upper class typically having British O- and A-level-type early education (Figure 9-17) that is believed to encourage critical thinking abilities in the students (section 5.5). In contrast to the students with Matric and FSc., these students tended to say that they found their early education helpful for learning architecture.

Institutional habitus was found to have a substantial impact on the critical thinking abilities of the students. The vast majority of students in the private established university group were found to possess strong reflection and critical thinking abilities (Figure 9-23). In addition, as noted above, the students' early education had a huge impact on these abilities. Moreover, the comparison of Figure 9-16 and Figure 9-17 reveals that most students with O- and A-level education attended schools in the private established university group. Public perceptions of these schools play a part here, as students from a higher social class (who can afford an O- and A-level education) prefer to attend expensive private universities. As a result, it is unsurprising that these schools have more students with deep learning approaches and critical and reflective thinking skills.

However, it is interesting to note that the students in the public art university group had strong reflection skills, despite most not having O- and A-level backgrounds. Here, it is evident that the institutional habitus of the schools plays a role in defining how their students learn, with public art schools being focused on critical thinking and reflection and thereby instilling these qualities in their students.

10.3.5 Social dynamics

In the literature, there are many criticisms of the traditional manner of teaching in the design studio, in which teachers have deemed the supreme authority (Giroux, 1983; Crysler, 1995). Instead, scholars recommend that the role of the tutor be one of a moderator and not a manager (McClellan et al., 2013; Kahvecioğlu, 2007), thereby encouraging students to think and learn independently (Al Maani, 2019).

The current study found that students' ability to learn independently is very closely related to their social background. As discussed in Chapter 8, the quantitative study found that 58.7% of the students with dominant cultural capital did not feel entirely dependent on their teachers' guidance, while 80% of those with lower cultural capital said that they did (Figure 8.10). A similar finding emerged from the qualitative study, where most students with cultivated habitus responded that it was not a good idea to follow teachers' instructions blindly, suggesting that one should take the initiative in learning, thereby suggesting intrinsic motivation and a deep learning approach. In contrast, most students from the other two habitus groups said that teachers' instructions should be followed to ensure better grades. These students are found to be practicing what is mentioned in literature as the Mastery-Mystery approach (Argyris, 1981), and believe that the way to excel in architecture is through following teachers. Thus, showing achieving and extrinsic motivation, and strategic and surface learning approaches (section 9.9.4, Figure 9-13).

This finding is in line with the theoretical concepts by Bernstein (1971), who states that students who take the initiative to develop pedagogical relationships, rather than relying on their teachers possess integration codes. The analysis of these concepts presented in Chapter 3 (section 3.10) reveals that integration codes allow students to develop deep learning approaches.

This variation in responses is again associated with early education, as most students with high cultural capital and cultivated habitus had expensive early education that trained them for thinking independently. The pilot study revealed that teachers appreciate students who are confident and bold, who engage in dialogue and ask questions, rather than being passive and following guidelines (section 5.9.6). This finding supports the conclusion of Stevens (2002)

that teachers perceive cultivated habitus students as creative geniuses because they are trained for the critical thinking that is vital for architectural learning.

Another element of the teacher-student relationship comes to the surface when one explores students' perceptions of social interaction between peers. Most students from cultivated habitus groups said that peer interaction is important, and they get to learn from it. However, a lot of resentment for this habitus group was found in the other habitus groups. For example, some students mentioned that students from big cities and expensive schools (i.e., those with high cultural capital) tended not to be very friendly towards them. Many complained about prejudicial treatment by teachers, who favoured the high cultural capital students. One student reported the following in the interview:

Teachers like the students who talk a lot and are confident, even if sometimes they have not done the work. Teachers will have a perception about these students that they are good students and won't judge them too harshly. Students like me, on the other hand, have to be very careful. We need to do extra work to show teachers that we are serious students.

The supporters of independent learning in the design studio stress the importance of peer learning, stating that students can learn from their differences (McClellan & Hourigan, 2013; Al Maani, 2019). However, it is clear in this study that students are not practicing positive peer learning as the main practice, and they always keep teachers at the center of learning activities.

The dissatisfaction of lower cultural capital students with teachers was also evident in the quantitative statistics. Most students in the high and middle cultural-capital groups said that teachers welcomed diversity of thought, while only half of those in the lower cultural-capital group agreed with this (Figure 8-9).

The students' perceptions of their teachers' treatment of different cultural capital students differed for the various institutional habitus groups. Figure 8-13 shows that lower cultural-capital students were the least likely in both private university groups to believe that instructors welcomed diversity of thinking. This is due to the demographic variation in these schools. As these institutions have more students from a higher social class, with high cultural

capital and cultivated habitus, the students from lower social classes feel under pressure to compete with other students of different social backgrounds.

10.3.6 Social class and architectural learning in a similar context to Pakistan

Pakistan is a developing country with a strong influence on its colonial past. The importance of English language in society and in academics as discussed at several points during this study is an outcome of this colonial past. This study has proved that social class affects how students behave and learn in the school of architecture, especially when it comes to social interactions. It is important to see how social disparity is coming into play in other post-colonial societies and how this study links to emerging discourse in these societies. Some post-colonial societies such as Australia and the USA are not found to be exactly relatable to Pakistan as they are not developing countries, so the focus is on the developing post-colonial societies.

The most closely related post-colonial society to Pakistan is India, as only 70 years ago these two used to be 1 country under British rule. Similar to Pakistan, social divisions play a big role in education at all levels in India (Filmer, 2000), so it impacts architectural education as well. While talking about cultural values in Architectural education Mazumdar (1993) explained that the current teaching and practice of architecture in India distanced the designer from the occupants of the buildings and suggests that different cultural perspectives should be given importance. In South Africa, another post-colonial and developing society, there is growing concerns about the values being taught in architectural education that gives rise to the social disparity in architecture. Coetzer (2010) discussed this aspect in detail and proposed alternative pedagogies such as “Process studio” and “Place making studio” to reduce the absurdity and inconsistencies of studying and working as an architect in South Africa. These studies exploring architectural education in India and South Africa confirm the findings of the current study.

10.4 Habitus transformation (success in school)

Most studies of the impact of social background on learning also discuss the role of education in transforming habitus (Bland, 2004; Horvat & Davis, 2011; Harris & Wise, 2012). Bourdieu (1984) emphasises that a person’s habitus changes with new interactions and education is the biggest driver of habitus transformation. This is the process that students go through to

become successful in their learning. Most students with lower cultural capital study architecture without any understanding of the profession. These students struggle to grasp the relevant ideas. In the pilot study, the teachers noted that the first experience of architecture can be overwhelming for some students.

Students with lower cultural capital often find it challenging initially to understand the culture of architecture, as mentioned in the literature (section 4.4) and revealed in the pilot study (section 5.9.4). However, students undergo a great transformation during the time they spend in the school, as they become more familiar with the culture. The period of training systematically reveals the evaluative and systematic character of the profession and transforms the habitus (Groat, 1982; Wilson, 1996). However, this transformation means different things to different individuals (Cuff, 1992). Lehman (2014) notes that, in their path towards transforming the habitus, students obtain many hidden injuries, as they lose their cultural capital and adapt. This study obtained quantitative data on students' experiences of transformation. Asked whether they felt more comfortable with architectural learning than they had in their first year, 84.7% in the high cultural-capital group said that they did, compared with just 57.7% of those in the low cultural-capital group (Figure 8-10). This question elicited some of the largest variation in responses for the different cultural capital groups (as shown in Figure 8-24).

Habitus transformation was explored through two interview questions about the concept of learning perceptions (section 9.9.3). The students were asked about their perceptions of architecture before attending the school. In all three habitus groups, most responded that they viewed the field as either entirely creative (akin to the other arts) or technical (similar to an engineering field). Very few students had correctly identified it as a complicated field in which both the arts and science play a role. Of those who had, most belonged to the cultivated habitus group. In the second question, the students were asked whether their perception had changed during their time at the school, indicating a transformation in habitus. Many students in all habitus groups said that their perceptions had already become more accurate about architecture and they now understood the complexity of the profession. A similar number of students responded that their understanding had improved, but their learning path had been

very difficult. This highlights the difficulties they had endured in the process of coming to understand architecture. Most of these students belonged to the mezzo habitus group (section 9.9.1). In contrast, most of the students who were still struggling to understand belonged to the oblivious habitus group, indicating their path to success had been much more challenging.

This finding is in line with the literature that indicates transformation requires considerable effort, particularly from students with a habitus of lower cultural capital. Students from a higher social class can more easily transform their cultural capital to educational success (Jaeger & Møllegaard, 2017), while students from a lower social class must exchange their cultural capital for educational capital (Harker, 1984). Koller (2002) observes that to fit in with the culture of the school, students must adopt this new culture and transform their habitus. The present study confirms this notion, as one of the students stated in their interview,

It was all very alien to me in the beginning, but then I started paying attention and try[ing] to adapt. I never even knew what architects do before coming to this school, and suddenly I am trying to be one. I had – and still have – many sleepless nights trying to understand (student number 39)

In the pilot study, teachers also explained this transformation by saying that often students from lower social class change so much through their time spent in the school that it becomes difficult to relate them to their previous personalities. Teachers also discussed the variation in the students' paths towards transforming their habitus. They identified that there were two kinds of students: the 'gifted ones', who did not need to make an extra effort, and the 'hardworking ones', who needed to work particularly hard to transform their habitus to be successful in architecture school. They also observed that the involvement of teachers was particularly important for the second category of students. These students require extra attention from teachers for confidence-building and the development of critical thinking. They also identified that the marking system should consider their progress, rather than focusing on the quality of the final product. Another important point highlighted by teachers was the learning attitude of students with high and low cultural capital. They mentioned that students with low cultural capital have a more positive attitude toward learning as they want to overcome the deficiencies they might have. After reviewing students' responses from the

main study, it becomes clear that they are open to transformation because they do not feel confident in the abilities they have.

Institutional habitus also plays an important role in habitus transformation. The public arts university group included the most substantial social stratification; and, with their pedagogic practices, these schools have managed to ensure most students from the lower cultural-capital group are comfortable with architecture (Figure 8-23). None of the students in this university group indicated in their interviews that they were still struggling to understand the culture (Figure 9-12).

Although the private established university group schools were practising a critical pedagogy and promoting social inclusion, they were not very successful in creating a learning environment conducive to a positive habitus transformation. Students at these schools were the most likely to respond negatively to the question of whether they were more comfortable now than they had been in their first year. There was only one student with an oblivious habitus in this university group (*student 8*), and he indicated that he was still struggling to understand the culture. The students of a lower social class in these schools were the least likely to express negative views about most questions in the survey, with the exception of three questions (satisfaction with performance, confidence at the beginning of a new project, and comfort levels compared to the first year). All three of these questions are related to the students' level of confidence and morale, and the patterns in their responses can be attributed to the demographics of these schools.

Owing to the fee structure, most students in these schools come from higher class backgrounds, which leads to a lack of social diversity. The small number of students from lower-class backgrounds who do attend these schools are usually dependent on a scholarship and tend to feel intimidated by the elite social setup. As the only oblivious habitus student in this university group stated in their interview,

'I am always shy around my class fellows. I had great difficulty in getting comfortable with [a] few students, and I could only do it because they approached me. Otherwise, I would have stayed isolated from the whole class' (Student Number 8).

He also mentioned that 'I feel very anxious [about] asking teachers any questions. I feel I will look stupid and everyone will think that I do not know anything'. As only one 'oblivious

habitus' student in this university group volunteered to participate, it would be inappropriate to generalise his responses. However, the quantitative data indicate that students from lower social class backgrounds in the private established universities group tend to feel less confident, despite positive learning experiences.

10.5 Physical Infrastructure and institutional habitus

The previous section discussed those factors that the quantitative and qualitative data analyses identified as most affected by students' social backgrounds. The role of institutional habitus was also explored. Another aspect of institutional habitus that substantially affects students' learning experiences is the physical infrastructure of the schools. This is associated with the comfort of the students when working in the studios. As mentioned in Chapter 7 (section 7.5.3), because of their access to greater funds and the fact that these schools are relatively new, both private university groups have well-developed infrastructures. In contrast, the public university group schools were developed decades ago and, as they do not charge high fees, they lack the funds for the maintenance of their physical infrastructure.

This may appear to be a small issue, but it is highly relevant because, when students cannot use the studio space comfortably, they prefer to work from home, which affects their relationships with their teachers and peers. As the private schools are expensive and students from lower social classes cannot afford to attend them, this further entrenches the divide in their learning experiences. This discussion is in line with the concept discussed in the literature as Trigwell, Ellis, & Han (2012) mentioned that the design of a new learning environment could considerably affect students' emotional range of learning.

Many interviewees mentioned that they only came to the studio for their own tutorials and left without engaging with other students' work. One student in the public engineering university group said as follows:

I think the biggest problem we face in government universities is the lack of confidence. Students who get lower marks and go to private sector universities by paying such high fee[s] get better grooming than us because they have more facilities. They have much better labs and equipment. We have a problem even working on Autocad, and they are rendering their projects using their labs. (Student Number 41).

10.6 Commentary on discussion

Based on the findings of the literature review, the theoretical framework diagram presented in Chapter 6 (Figure 6-4) presents the relevant concepts in the current study. These concepts of learning experiences and approaches were investigated in Chapters 8 and 9. In the previous section, the relationships between these concepts were discussed and those most strongly affected by the social background were explored.

Detailed analysis of these concepts reveals a very strong association between social background and learning experiences. Based upon this analysis, Figure 10.2 depicts these concepts and their relationships, with red and orange circles showing the learning experiences and perceptions of performance, respectively, which were investigated through the quantitative data (sections 8.3.4 and 8.35). The black and grey circles represent the six learning approaches concepts investigated through the qualitative data (section 9.9). The factors represented by transparent circles were not found to be affected significantly by the students' social background.

The larger circles indicate the factors most affected by social background, and the lines joining the factors indicate their relationships. These similar concepts were investigated through two sets of data, and the dependence of these factors on social background enables the triangulation of data source and analysis. Other than the direct relationships among these concepts, the utility of previous education was found to affect most concepts. This suggests that students' learning conceptions, as influenced by their social background, have the most substantial effect on their learning experiences and approaches. This is in line with the literature on learning approaches discussed in section 3.5.4, which states that students adopt deep learning approaches if they have had positive learning experiences in the past. These students were found to be located on the higher achievement spectrum, while those students with negative emotional learning experiences tend to adopt surface learning approaches (Prosser & Trigwell, 1999).

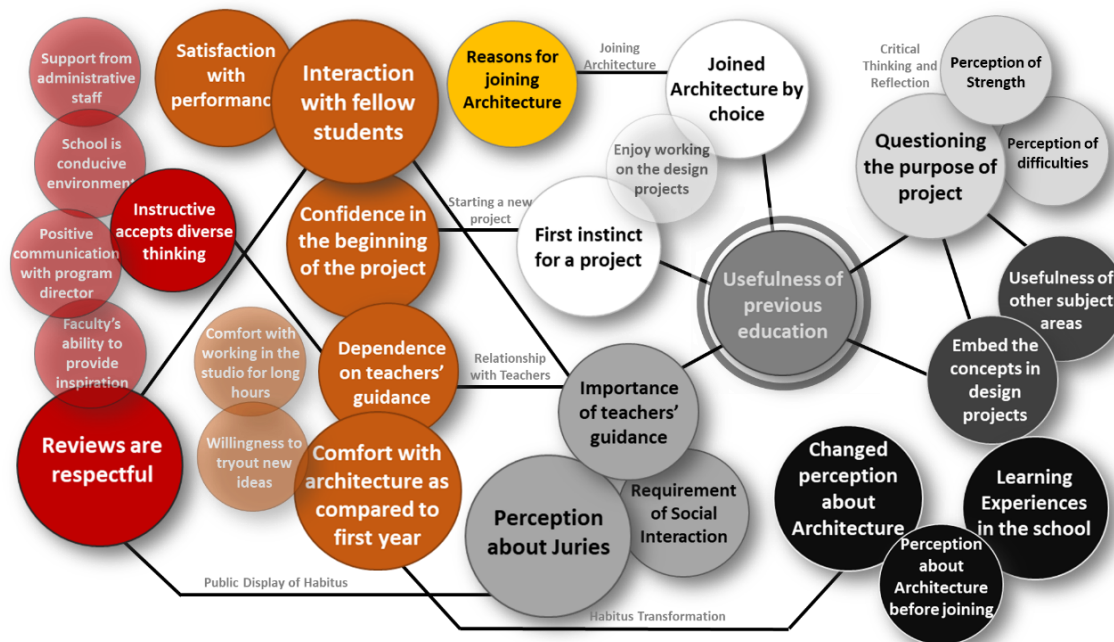


Figure 10-2: Factors investigating learning experiences and approaches of students

It is clear from the detailed analysis that social background – investigated here in terms of their cultural capital and habitus – affects their experiences of different aspects of architectural learning and their adoption of learning approaches. This confirms the findings presented in Chapter 9, indicating that a student’s social background affects their learning approach. Based on Figure 9-20Figure 9-19 to Figure 9-23 and the combined analyses in this chapter, it can be stated with confidence that most students with low cultural capital and oblivious habitus possess the extrinsic motivation and employ surface learning approaches. In contrast, students with high cultural capital and cultivated habitus tend to possess an intrinsic motivation and employ a deep learning approach. The students with ‘middle cultural capital’ and in the mezzo habitus group fall into all three categories of learning approach, and no conclusive patterns emerge. However, this third category of social background made it possible to obtain clear responses for the students of higher and lower social classes. Institutional habitus was also found to play a crucial role in students’ learning experiences and approaches. This determines students’ reasons for enrolling in a school of architecture and affects how they approach the design work in the studio, how they experience reviews, and how they form relationships with their teachers and peers. It also influences their

development of critical thinking skills and ability to reflect upon their learning. This variation in learning experiences and approaches is evident in Figure 9-23, which shows the combined learning approaches of different institutional habitus groups. Most students in the private established university group take a deep learning approach. Students from the other three groups employ various learning approaches, with a deep approach for some aspects of learning, depending upon the focus of the schools. As the demographics of these schools are reflective of social background, institutional habitus enforces the variation in learning experiences and approaches, which are indirectly dictated by social class.

This analysis responds to the hypothesis posed in section 6.9 and confirms that social class affects the learning experiences and approaches of students in the school of architecture. Social class also significantly influences their chances of success (discussed in section 10.4), as habitus transformation is much more challenging for students from a lower social class.

CHAPTER ELEVEN
Conclusions

11 Conclusions

11.1 Introduction

With its use of quantitative and qualitative data to analyse students' learning experiences and approaches in Pakistani schools of architecture, this study provides a detailed description of social inequality in the field. In addition to revealing the role of social background, this study explores the impact of the various teaching practices employed in different schools.

Previous chapters have explored the importance of this research topic and its consideration in the extant literature. They have also described the data collection process, data analyses, and the results and findings. This chapter provides the conclusions based on these findings. It also reviews the limitations of this study and makes recommendations for further research.

11.2 Contribution to the field

This study has investigated students' perspectives of their learning experiences. This approach has been extensively used in previous studies, and it is recommended in the literature (as discussed in section 3.3.1). The current study provides support for the notion 'that learning takes place through the active engagement of learners' (Tyler, 1949). It also provides a fresh perspective for teachers and schools to reveal students' views of teaching practices and how they can be improved, as well as investigating teachers' perspectives in the pilot study. This enabled the theoretical triangulation of the findings.

This study was motivated by the evidence of social inequality in architectural education, and the purpose was to explore the variation in students' learning experiences and approaches driven by their social background. Inequality is a dominant theme in the sociology of education, and social class lies at the heart of social inequality (Thomson, 2019). As Bernstein (1977, P. 175) identifies, class is the dominant cultural category. It is vital to investigate inequality in education because education is the institution that enables social inequalities to be maintained over generations (Bourdieu, 1984), or, as Thomson (2019, p. 2) puts it, this is where the class is 'made'. For this reason, scholars have sought to theorise the role of social disparity in education and identify how inequality is mediated by education (Marx, 2000; Weber, 2013; Bourdieu, 1984).

Bourdieu's concepts are widely used in the literature to investigate how the social world becomes a part of the human personality and dictates the actions an individual may take. Numerous methodologies have been used in research to explore these concepts, and a huge amount of knowledge has been generated. However, this study does not rigidly follow any single methodology; rather, it critically analyses different concepts and theories to explore the relationship between education and the social world. It considered why Bourdieu's theories are best suited to such investigations, and a theoretical framework was built on the basis of a detailed study of the concepts. This detailed description of theories and the theoretical framework adds to the knowledge available on this subject and, as such, may guide future researchers. Cultural capital is a concept widely implemented in investigations of the role of social class in education. However, previous works typically highlight its limitations and recommend the use of habitus for a deeper understanding of the impact of social class. This study acknowledges this recommendation and uses both concepts to advance knowledge in this area. It confirms the ideas previously discussed in literature by concluding that social class defines cultural capital and habitus. Students from high social class often possess high cultural capital and cultivated habitus which makes their path to learning easier.

This study also considers the relevance of Bourdieu's concept for investigating the social world in a developing country, such as Pakistan. The body of knowledge utilising Bourdieu's theories primarily caters to Western society, with very few studies conducted in eastern countries. The current study, which involved both a pilot and a full-scale study to investigate the impact of the social world on human behaviour, is vital in a society such as Pakistan. The lack of central facilities and good quality public sector education worsens the impact of social stratification. This study argues for an investigation of how this social stratification is transforming learning experiences. It is hoped that this study will inspire future researchers and provide a theoretical ground for new studies investigating the social world and education in developing countries.

This research involved mixed-methods techniques for data collection. This is widely used and highly recommended, especially for the social sciences, as it allows data triangulation and methodological triangulation. The use of qualitative and quantitative methods enabled a deeper understanding of students' social background in terms of cultural capital and habitus. It also enhanced understanding of students' learning experiences, as

more students could be investigated in the quantitative component of the study. Students' learning approaches were also illuminated by the biographical narrative interview method (BNIM). Together, these data-collection methods perfectly compliment different aspects of the study, as well as providing an opportunity to explore the problem on different scales and from different perspectives. In addition to these two conventional methods of data collection, internet data and field notes were also employed to explore the notion of institutional habitus. Bourdieu (1984) advises against reliance on a single method and instead recommends employing a number of methods to develop the deepest possible understanding of the problem. This study is an example of mixed-methods research that does not limit itself to any one method or set of methods. Instead, it enables a wide range of analyses and shows the relevance of the various methods to the factors under study. It is hoped that this can provide a guiding strategy for future studies exploring complex concepts.

There is an extensive body of research and empirical evidence on social class inequality in education, showing how these inequalities affect students' chances of success in education and in life (discussed in section 2.16). However, these studies typically address the role of social inequality in early education (Reay, 2004a; Ingram, 2009; Bodovski, 2010; Andersen & Jæger, 2015; Xu, 2017). Other studies investigate the relationship between social class and access to higher education or choice of higher education institution (discussed in sections 2.16.1 and 2.16.2). The small body of knowledge on social inequalities in higher education is focused primarily on law (Manderson & Turner, 2006) and medicine (Luke, 2007). While there have been investigations of inequality in architectural education, these are focused on questions of gender (Ahrentzen & Anthony, 1993), based on observations rather than empirical data (Stevens, 2002), or focused on one aspect of architectural learning, such as design review (Webster, 2005, 2006, 2007, 2008).

In contrast, the current study involved a large quantity of quantitative and qualitative data, thereby contributing considerable knowledge to this area. It investigates students' first-hand experiences of learning in architecture schools and provides insights into how their social class affects their learning approaches. This study shows that social class has the most substantial impact on the aspects of learning driven by students' level of confidence. As Webster (2005) explains, the experience of architectural reviews is heavily

dependent on students' habitus; and the current study confirms this notion. In addition, this study identifies that habitus and cultural capital affect other aspects, such as students' confidence in their pedagogic relationships with teachers, their use of initiative in their learning, and their feelings about starting new projects, all of which determine whether they become independent learners. Al Maani (2019) identifies that working and learning among peers is crucial for independent learning. McClean et al. (2013) have identified the importance of peer learning as a central tool for reducing the influence of power. This study explains that students' ability to interact with and learn from their classmates is strongly influenced by their social class. This is particularly important in a setting where social diversity is rare, as seen here, where students with oblivious habitus in the private established university group felt much less confident. This study also reveals the teachers' points of view on this matter, confirming the findings of the main study. It became clear through both the main study and the pilot study that teachers must make extra efforts to engage with students from lower social classes to ensure they feel comfortable in social interactions and to make the review a beneficial learning experience for them.

The relationship between social class and the choice of higher education institution and profession has been widely explored in literature in relation to many subject areas. However, this is the first study to explore the impact of social class on the decision to enrol in the school of architecture, and the effect it identifies appears to be very strong. Stevens (2002) concludes, based on his observations and experiences, that architecture has a reputation as a profession of the elite class; and, as a result, many students from lower social classes do not consider it to be a good career option. This study confirms this conclusion, based on data, and shows that students with high cultural capital and cultivated habitus are more attracted to the profession, as their social upbringing introduces it to them. In contrast, most students with oblivious habitus arrive in the school due to other circumstances. Furthermore, almost all the students for whom architecture was their first choice reported a deep learning approach and intrinsic motivation. This finding highlights the importance of introducing students to architecture in their early education, as this would allow more students to make informed decisions about their professional lives.

As mentioned in the literature, the requirement for hands-on learning in architecture necessitates critical thinking abilities (Schon, 1985). However, previous studies have not explored how this ability is affected by the students' social background. This study concludes that skills in critical thinking and reflection are greatly defined by habitus, as a cultivated habitus translates into a deeper understanding of complex concepts and the ability to question them. They are also affected by students' experiences of education prior to enrolment in the school of architecture, as there are distinct tiers of secondary education in Pakistan. O- and A-level education teaches critical thinking abilities, which help students in their architectural learning. However, this type of education is very expensive and only available to high-class students. Thus, it would be highly beneficial to revise the curricula and pedagogies of secondary education in Pakistan to enhance students' experiences of learning in higher education.

These findings on the impact of social class on students' experiences of reviews, their ability to develop pedagogic relationships and to interact with peers, their higher education choices, and their abilities in critical thinking and reflection are very important. These findings could enable tutors to better serve students from different social backgrounds, thereby improving their learning experiences and easing their transformation to the required architectural habitus.

The concept of learning approaches is very well-developed and has been widely explored since its introduction by Marton and Saljo (1979). Many studies have investigated students' adoption of different learning approaches during the years of their education, in relation to their past learning experiences or perceptions of learning contexts (Biggs, 1993). One major study investigated students' learning approaches throughout the different years of their architectural learning (Iyer, 2018). However, no study has explored the learning approaches of students in relation to their social class. The current study concerns the role of social class in determining a student's learning approach in the school of architecture, and the relationship it has identified is substantial. Most students of a higher social class had cultivated habitus and a deep learning approach, while most of those with oblivious habitus employed a surface learning approach. The strongest driver of learning approach was found to be early education experience, and the quality of a student's early education is directly dependent on social class in Pakistan, as

discussed previously. Thus, an indirect relationship between social class and learning approaches is also identified by the current work.

Moreover, before adopting the Maton and Saljo concept of learning approaches, the study critically analysed it and identified some shortcomings. In particular, the concept does not entail that how students develop pedagogic relationships and use the knowledge in different subject areas which becomes a part of their learning approach. The Bernstein (1971) theory of knowledge codes overcomes this shortcoming as discussed in literature through a detailed comparison of learning approaches and knowledge codes. The detailed methodology built on these two concepts thus delivers a new approach for the investigation of learning approaches.

The role of institutional habitus is discussed in the literature on higher education (as discussed in section 2.16.5), but no studies have focused on schools of architecture. Although the methodology used here for the analysis of the inherent attributes of the schools was borrowed from the literature (Burke, Emmerich & Ingram, 2013), this methodology has never been used for analyses of such complexity. For this reason, the current work makes a valuable contribution to the available knowledge on institutional habitus. This investigation takes a unique perspective on pedagogic practices in the schools of architecture. Moreover, this analysis enables the categorisation of these schools to explore how they encourage students' learning experiences. This adds a fresh perspective on the role of the school in guiding students' learning experiences and approaches. The analysis here revealed that schools that perform critical pedagogy and focus on social inclusion in both their admission processes and studio teaching are more successful in creating positive learning environments for their students. Furthermore, it has been shown the school's demographics play a key role in ensuring that students from all social classes feel welcome. Schools that focus on imparting knowledge rather than nourishing individual thinking and which prioritise large-scale projects in the studio discourage their students from using their initiative and developing pedagogic relations. This study addresses the literature on architectural education as a 'field' by explaining how different aspects of it contribute to creating a social world for students to explore and become a part of. Although this stance reflects the available literature, it takes an entirely fresh perspective on the practices of teaching and learning in architecture schools. It adds up to the body of knowledge that is focused on learners and proves that

investigating students' perspective enables a deep understanding of learning in the school of architecture. This is a new epistemological perspective from which to observe a familiar learning environment, and it provides a unique and promising way of engaging with the social element of architectural education.

No research in the Pakistani context has investigated the role of social class in higher education. In this study, social class is found to have a substantial impact on students' learning experiences in the schools of architecture in Pakistan. Social class strongly affects students' experiences of early education and their perceptions of the architecture profession. Other aspects affected by the social class include students' confidence when beginning a new project and when engaging in social interactions with their teachers and peers, their skills in critical thinking and reflection, and their transformation of their perceptions and understanding of architecture. These findings are crucial, not only for improving architectural education in Pakistan but also for providing a new direction for exploration in the global context.

And finally, an understanding of how students' social class determines their attitude for learning and for social engagement in the school provides the opportunity to give them a better learning environment. As mentioned McClean & Hourigan (2013)

“Deeper understanding of the relationships between tutor and peer dialogue, or feedback, and between informal and formal elements of the learning process is beneficial to the design of studio-based learning in architectural design”

11.3 Limitations of this research and opportunities for future work

This study has various limitations to be considered. The methodological and contextual limitations identified are listed below.

- This study is limited to one country and is bound by the pedagogical practices set by the regulatory body (Pakistan Council of Architects and Town Planners). The effects of the social class systems in different countries are diverse, thus it is difficult to generalise the findings of this study to the global context.
- The cultural aspects on which this investigation of cultural capital and – to some extent – habitus is dependent are based on the findings of a literature review, rather than an exploration of dominant cultural factors in Pakistani society.
- This study deals with some very complex concepts of learning experience and approaches by categorising them in terms of habitus and institutional habitus,

and so on. Although there was an attempt to connect the individual students' learning approaches – and a description of the most atypical case in the private established university group – it was not possible to look deeply into all the individual cases due to the nature of this large-scale analysis.

- In its exploration of habitus transformation, this study generalises the responses of students from across the year groups and thus does not investigate the relationship between transformation experience and the current stage of the study.
- As discussed in section 10.3.3, there are substantial differences between the experiences of students in one-to-one teaching and in juries in the private established and public art university groups. The students reported that the teachers were more welcoming and respectful of social diversity in one-to-one interactions than they were in juries. The cause of this contradictory practice was not immediately evident in either the quantitative or qualitative data.
- Due to the inability of accessing students' reports and results in data collection, this study does not explore students' final performance in the design studio and its relationship to their social background and learning approaches.

This study recommends that further research be conducted in this very important area. A similar study could be conducted in a more developed country to identify the role of social class in different circumstances. While early education was found to be a key driver of learning experiences and approaches in this study, this could be highly context-specific, as the quality of early education in Pakistan is strongly reflective of social class, which may not be the case elsewhere. Research into the role of early education in architectural learning in other countries would provide a clearer picture.

A detailed investigation of the defining aspects of cultural capital in Pakistan is also required. Investigators using Bourdieu's concepts to explore the complex relationships between social class and education and other aspects of life require an elementary-level study that could be used as a reference for cultural aspects of Pakistani life.

Class is only one social characteristic that can affect learning experiences and approaches; and gender is another. The literature shows clearly that gender plays a crucial role in a developing country such as Pakistan, thus it is essential to identify the impact of this on learning experiences and approaches. Furthermore, the impacts of

gender and social class could be explored to identify their combined and individual effects on learning experiences.

As mentioned in the limitations, students' final performance in the design studio was not explored in this study. A study in Pakistan exploring students' performance in the architecture studio in relation to their learning approach will be interesting and will show if having a deep learning approach ensures better grades. As Roberts (2004) mentioned that having holistic, global thinking does not always transform into good grades.

A follow-up study on students' experiences after graduation would also be valuable. It has been shown here that students from higher social classes tend to begin their studies with a greater understanding of the profession – while those from lower social classes must familiarise themselves with architectural habitus during their academic career. A post-graduation study could explore the impact of these differing experiences on the students' professional outcomes.

11.4 Concluding remarks

The implementation of social justice in educational practice is a very complex and challenging task. It requires the practice of empathy. First, understanding and valuing that every student is unique, each coming from a social background that has formulated their personality. Second, pedagogic practices that accommodate students' diversity and uniqueness are vital. In education, there has long been a belief in the principles of meritocracy, which assumes that any student with sufficient ability and a willingness to work hard will succeed. However, research has shown repeatedly that there are many factors at play that determine students' learning paths and chances of success. As this study has shown, social class is one of these factors, and this has strong implications for personality development and, consequently, for learning experiences in the school of architecture.

Education is the most substantial driver of social mobility. In a developing society such as Pakistan, where resources are limited, education is considered the only equaliser. It is a means by which young people from lower social classes can achieve something beyond what their current life offers them. For this reason, inequality in educational practices due to social class has devastating impacts on society. The current education system in Pakistan encourages students from higher social classes to develop critical thinking abilities from an early age. Expensive schooling ensures that they are familiar with the

dominant culture of their society, which trains them to perform better in higher education, such as the schools of architecture. It then provides them with better learning environments in terms of superior physical infrastructure and, in some cases, more inclusive teaching pedagogies. As Waters (2018, p.413) observes, 'true social mobility cannot be achieved whilst a narrow segment of society is able to hold onto resources. Pierre Bourdieu states that working-class students often do not perform well in schools, not because of their inability to learn but because their educational systems are based on the elite and middle-class culture (Bourdieu, 1984).

Although this study concludes that inequality in early education has a lasting impact, the schools of architecture nevertheless have a very important role to play. As shown by the analysis of institutional habitus, schools that are more socially inclusive perform better in creating positive learning experiences for their students; and there is room for improvement here, even for the best practising schools. As Thomas (2002) states, an institutional habitus that embraces diversity is more likely to retain students from various social backgrounds. It is the responsibility of the schools of architecture to ensure that every student feels welcome, irrespective of their personality attributes. They should also be nurtured in accordance with their individual characteristics, rather than being expected to fit the same mould. Prosser and Trigwell (1999) note that a learning context that enforces a deep learning approach is not sufficient: universities must understand their students and design learning contexts according to students' perceptions of their positions in the context.

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Appendices

Appendix A

Questionnaire Survey for Understanding Students Learning Experiences in the School of Architecture in Pakistan

This Survey is part of a PhD studies on "Students learning approaches in Architecture in relation to their social background".

- It contains questions about family, early life and early education experience along with learning experience in Architecture school.
- Data generated from this survey will be used for academic purpose only and will be destroyed after 5 years of completion of this study.
- Participants names will not be mentioned in any form in the final documents.
- Please read all the questions carefully and answer accordingly.
- You need to select three options in Question no. 11

Name of University

Year of Study	
1 st	4 th
2 nd	5 th
3 rd	

Gender

Male
Female

Cultural activities in early education					
		Twice a month or more	Once a month	Only a few times in a year	Never
1	How often did you attend art class in school				
2	How often did you attend creative writing class in school				
3	How often did you attend music/dance class in school				
4	How often did you participate in extracurricular activities in school				

Family cultural activities					
		Quite Often	Usually	Sometimes	Never
5	As a child how often you used to go to Public library				
6	As a child how often you were encouraged to read (other than curriculum books) by your parents				
7	As a child how often you attended cultural centers (Museum/ Theater/ play)?				
8	As a child how frequently you used to go for family holidays (Pakistan or abroad)?				

Parents Education Level							
		Under Matric	Matric	Intermediate	Graduate	Masters/ M.Phill	PhD

9	What is your father's education						
10	What is your Mother's education						

11	What secondary education you had before coming to school of Architecture?
	Matric/FA/FSc
	O & A levels
	Others (please Specify)

12	Do you find the knowledge gained in early and high school education useful in learning architecture?
	Very Useful
	Moderately Useful
	Slightly Useful
	Not Useful

English language skills		Excellent	Above Average	Average	Below Average
13	How do you rank your ability to communicate in English before coming to architecture school?				
14	How do you rank your ability to write in English before coming to architecture school?				

15	Why did you choose to be an architect
	Family's advice
	Attracted by profession
	Inspired by some architect you personally know
	Inspired by some famous architect's work
	Got admission based on Merit

16	What initially attracted you to get admission in this particular architecture school? Tick on the Top Three reasons in the list below.
	Academic Reputation
	Scholarship from the university
	Campus atmosphere
	Location of University

Family consideration	Knowledge of current faculty
Employment prospects	Desire to work with particular architectural organization
Cost	Resources at this school of architecture

17	How much emphasis is given on the following subject areas in your school? Check the right box in front of each subject area.			
	Strongly Emphasized	Moderately Emphasized	Slightly Emphasized	Not at all Emphasized
Design Studio				
Manual presentation skills				
Computer aided presentation skills				
Urban Design				
Landscape Design				
Architectural History				
Structures & Construction				
Interior design				
Environmental responsive design				
Architectural Practice				

18	In your opinion how much emphasis should be given on the following subject areas for learning architecture? Check the right box in front of each subject area.			
	Very Important	Moderately Important	Slightly Important	Not Important
Design Studio				
Manual presentation skills				
Computer aided presentation skills				
Urban Design				
Landscape Design				
Architectural History				
Structures & Construction				
Interior design				
Environmental responsive design				
Architectural Practice				

19	How satisfied with your choice of architecture at this university?			
	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree

Hidden Curriculum

		Quite Often/ Strongly agree	Somewhat frequently/ Somewhat agree	Only occasionally/ Somewhat disagree	Not at all/ Strongly disagree
20	Importance of Verbal presentation skills to succeed in Architectural School				
21	School is conducive environment for new ideas				
22	Critique are respectful and constructive (in studio discussions and final juries)				
23	Instructors accept diverse thinking				
24	Support from administrative staff				
25	Positive communication with program director				
26	How satisfied with faculty's ability to provide inspiration?				

Personal performance and satisfaction					
		Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree
27	How satisfied you are with your performance in architectural school?				
28	How confident you feel in the beginning of a new project?				
29	How willing you are to try out new ideas in design studio?				
30	How much you think you are dependent on the guidance provided by teachers?				

31	You feel confident in interacting with fellow students in the school?				
32	You feel comfortable working in the studio for long hours?				
33	You feel more comfortable with architectural environment as compare to 1st year?				

Appendix B

Students Response to different areas of taught curriculum in institutional habitus groups

University Groups * Design Studio Crosstabulation							
			Strongly Emphasized	Moderately Emphasized	Slightly Emphasized	Not at All	
University Groups	Private Est.	Count	387	34	6	0	427
		% within University Groups	91%	8%	1%	0%	100%
	Private Emer.	Count	166	47	14	5	232
		% within University Groups	72%	20%	6%	2%	100%
	Public Art	Count	218	33	6	0	257
		% within University Groups	85%	13%	2%	0%	100%
Public Eng.	Count	284	80	30	19	413	
	% within University Groups	69%	19%	7%	5%	100%	
Total		Count	1055	194	56	24	1329
		% within University Groups	79%	15%	4%	2%	100%

Table B-6

University Groups * Manual presentation skills Crosstabulation							
			Strongly Emphasized	Moderately Emphasized	Slightly Emphasized	Not at All	
University Groups	Private Est.	Count	208	159	56	2	425
		% within University Groups	49%	37%	13%	0%	100%
	Private Emer.	Count	73	114	35	9	231
		% within University Groups	32%	49%	15%	4%	100%

	Public Art	Count	145	90	20	3	258
		% within University Groups	56%	35%	8%	1%	100%
	Public Eng.	Count	149	159	86	15	409
		% within University Groups	36%	39%	21%	4%	100%
Total		Count	575	522	197	29	1323
		% within University Groups	43%	39%	15%	2%	100%

Table B-2

University Groups * Computer aided presentation skills Crosstabulation							
			Strongly Emphasized	Moderately Emphasized	Slightly Emphasized	Not at All	
University Groups	Private Est.	Count	248	89	64	26	427
		% within University Groups	58%	21%	15%	6%	100%
	Private Emer.	Count	90	61	63	18	232
		% within University Groups	39%	27%	29%	8%	100%
	Public Art	Count	30	111	86	31	258
		% within University Groups	10%	43%	35%	12%	100%
	Public Eng.	Count	95	166	119	32	412
		% within University Groups	26%	40%	25%	8%	100%
Total		Count	463	427	332	107	1329
		% within University Groups	35%	32%	25%	8%	100%

Table B-3

University Groups * Urban Design Crosstabulation							
			Strongly Emphasized	Moderately Emphasized	Slightly Emphasized	Not at All	
University Groups	Private Est.	Count	260	88	55	22	425
		% within University Groups	61%	21%	13%	5%	100%
		Count	39	86	78	28	231

	Private Emer.	% within University Groups	17%	37%	34%	12%	100%
	Public Art	Count	43	136	67	12	258
		% within University Groups	17%	53%	26%	5%	100%
	Public Eng.	Count	80	128	138	65	411
		% within University Groups	19%	31%	34%	16%	100%
Total	Count		422	438	338	127	1325
	% within University Groups		31%	33%	26%	10%	100%

Table B-4

University Groups * Landscape Design Crosstabulation							
			Strongly Emphasized	Moderately Emphasized	Slightly Emphasized	Not at All	
University Groups	Private Est.	Count	290	90	26	22	426
		% within University Groups	68%	21%	6%	5%	100%
	Private Emer.	Count	61	73	74	23	231
		% within University Groups	26%	32%	32%	10%	100%
	Public Art	Count	60	102	77	17	256
		% within University Groups	23%	40%	30%	7%	100%
	Public Eng.	Count	121	140	111	39	411
		% within University Groups	29%	34%	27%	9%	100%
Total	Count		532	405	288	101	1324
	% within University Groups		40%	30%	22%	8%	100%

Table B-5

University Groups * Architectural History Crosstabulation							
			Strongly Emphasized	Moderately Emphasized	Slightly Emphasized	Not at All	
University Groups	Private Est.	Count	204	151	60	11	426
		% within University Groups	48%	35%	14%	3%	100%

	Private Emer.	Count	82	77	52	21	232
		% within University Groups	35%	33%	22%	10%	100%
	Public Art	Count	141	75	39	5	260
		% within University Groups	55%	27%	15%	2%	100%
	Public Eng.	Count	130	121	95	62	408
		% within University Groups	32%	30%	23%	15%	100%
Total		Count	557	424	246	99	1326
		% within University Groups	42%	32%	19%	7%	100%

Table B-6

University Groups * Structures & Construction Crosstabulation							
			Strongly Emphasized	Moderately Emphasized	Slightly Emphasized	Not at All	
University Groups	Private Est.	Count	215	129	69	14	427
		% within University Groups	50%	30%	16%	5%	100%
	Private Emer.	Count	83	90	44	15	232
		% within University Groups	36%	39%	19%	6%	100%
	Public Art	Count	71	111	53	21	256
		% within University Groups	28%	43%	21%	8%	100%
	Public Eng.	Count	328	40	34	8	410
		% within University Groups	80%	10%	8%	2%	100%
Total		Count	697	370	200	58	1325
		% within University Groups	52%	28%	15%	5%	100%

Table B-7

University Groups * Interior design Crosstabulation							
			Strongly Emphasized	Moderately Emphasized	Slightly Emphasized	Not at All	
University Groups	Private Est.	Count	150	152	72	52	426
		% within University Groups	35%	36%	17%	10%	100%
	Private Emer.	Count	56	85	58	33	232
		% within University Groups	24%	37%	25%	14%	100%
	Public Art	Count	154	52	25	26	257

		% within University Groups	60%	20%	10%	10%	100%
	Public Eng.	Count	265	35	45	64	409
		% within University Groups	65%	9%	11%	15%	100%
Total		Count	625	324	200	175	1324
		% within University Groups	47%	25%	15%	13%	100%

Table B-8

University Groups * Environmental responsive design Crosstabulation							
			Strongly Emphasized	Moderately Emphasized	Slightly Emphasized	Not at All	
University Groups	Private Est.	Count	275	91	43	16	425
		% within University Groups	65%	21%	10%	4%	100%
	Private Emer.	Count	67	82	60	23	232
		% within University Groups	29%	35%	26%	10%	100%
	Public Art	Count	50	100	75	32	257
		% within University Groups	20%	39%	29%	12%	100%
	Public Eng.	Count	288	51	28	44	411
		% within University Groups	70%	12%	7%	11%	100%
Total		Count	680	324	206	115	1325
		% within University Groups	51%	24%	16%	9%	100%

Table B-9

University Groups * Architectural Practice Crosstabulation							
			Strongly Emphasized	Moderately Emphasized	Slightly Emphasized	Not at All	
University Groups	Private Est.	Count	162	144	103	16	425
		% within University Groups	38%	34%	24%	4%	100%
		Count	58	70	42	62	232

	Private Emer.	% within University Groups	25%	30%	18%	28%	100%
	Public Art	Count	48	84	58	60	250
		% within University Groups	19%	34%	23%	24%	100%
	Public Eng.	Count	129	134	75	69	407
		% within University Groups	32%	33%	18%	17%	100%
Total	Count		397	432	278	207	1314
	% within University Groups		29%	33%	23%	16%	100%

Table B-10

University Students Perception of Taught Curriculum																				
Name of Subject	Private Established					Private Emerging					Public Art					Public Engineering				
	Strongly Emphasized	Moderately Emphasized	Slightly Emphasized	No t at all	Aggregated Score	Strongly Emphasized	Moderately Emphasized	Slightly Emphasized	No t at all	Aggregated Score	Strongly Emphasized	Moderately Emphasized	Slightly Emphasized	No t at all	Aggregated Score	Strongly Emphasized	Moderately Emphasized	Slightly Emphasized	No t at all	Aggregated Score
Design	91.0%	8.0%	1.0%	0.0%	39.0%	72.0%	20.0%	6.0%	2.0%	36.2%	85.0%	13.0%	2.0%	0.0%	38.3%	69.0%	19.0%	7.0%	5.0%	35.2%
Manua l Presentation Skills	49.0%	37.0%	13.0%	1.0%	33.4%	32.0%	49.0%	15.0%	4.0%	30.9%	56.0%	35.0%	8.0%	1.0%	34.6%	36.0%	39.0%	21.0%	4.0%	30.7%
Computer aided presentation skills	58.0%	21.0%	15.0%	6.0%	33.1%	39.0%	27.0%	29.0%	8.0%	30.3%	10.0%	43.0%	34.0%	12.0%	24.9%	26.0%	40.0%	25.0%	8.0%	28.2%
Urban Design	61.0%	31.0%	13.0%	5.0%	36.8%	17.0%	37.0%	34.0%	12.0%	25.9%	17.0%	53.0%	26.0%	5.0%	28.4%	20.0%	31.0%	34.0%	16.0%	25.7%
Landsc ape Design	68.0%	21.0%	6.0%	5.0%	35.2%	26.0%	32.0%	32.0%	10.0%	27.4%	23.0%	40.0%	30.0%	7.0%	27.9%	29.0%	34.0%	27.0%	10.0%	28.2%
Architectural History	48.0%	35.0%	14.0%	3.0%	32.8%	35.0%	33.0%	22.0%	10.0%	29.3%	55.0%	27.0%	15.0%	2.0%	33.3%	32.0%	30.0%	23.0%	15.0%	27.9%
Structure & Construction	50.0%	30.0%	16.0%	5.0%	32.7%	36.0%	39.0%	19.0%	7.0%	30.6%	28.0%	43.0%	21.0%	8.0%	29.1%	80.0%	10.0%	8.0%	2.0%	36.8%
Interior Design	35.0%	36.0%	17.0%	10.0%	29.2%	24.0%	37.0%	25.0%	14.0%	27.1%	60.0%	20.0%	10.0%	10.0%	33.0%	65.0%	9.0%	11.0%	15.0%	32.4%
Environment Responsive Design	65.0%	21.0%	10.0%	4.0%	34.7%	29.0%	35.0%	26.0%	10.0%	28.3%	20.0%	39.0%	29.0%	13.0%	26.8%	70.0%	12.0%	7.0%	11.0%	34.1%
Architectural Practice	38.0%	34.0%	24.0%	4.0%	30.6%	25.0%	30.0%	18.0%	28.0%	25.4%	19.0%	34.0%	23.0%	24.0%	24.8%	32.0%	33.0%	18.0%	17.0%	28.0%

Table B-11

Taught Curriculum All Aggregated Scores from Table B-11 Combined				
	Private Established	Private Emerging	Public Art	Public Engineering
Design	39.0%	36.2%	38.3%	35.2%
Manual Presentation Skills	33.4%	30.9%	34.6%	30.7%
Computer aided presentation skills	33.1%	30.3%	24.9%	28.2%
Urban Design	36.8%	25.9%	28.4%	25.7%
Landscape Design	35.2%	27.4%	27.9%	28.2%
Architectural History	32.8%	29.3%	33.3%	27.9%
Structure & Construction	32.7%	30.6%	29.1%	36.8%
Interior Design	29.2%	27.1%	33.0%	32.4%
Environment Responsive Design	34.7%	28.3%	26.8%	34.1%
Architectural Practice	30.6%	25.4%	24.8%	28.0%

Table B-12

Cross-Tabulation Responses of students from different University Groups to different aspects of hidden curriculum

University Groups *Crosstabulation* School is conducive environment for new ideas							
			Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree	Total
University Groups	Private Est.	Count	10	58	152	207	427
		Expected Count	29.6	79.0	155.3	163.1	427.0
		% within University Groups	2.3%	13.6%	35.6%	48.5%	100.0%
	Private Str.	Count	30	53	84	63	230
		Expected Count	10.1	42.5	89.7	87.8	230.0
		% within University Groups	13.3%	23.0%	36.5%	27.4%	100.0%
	Public Art	Count	25	45	84	104	258
		Expected Count	17.9	17.7	93.9	98.5	258.0
		% within University Groups	9.7%	17.5%	32.6%	40.3%	100.0%
	Public Eng.	Count	58	76	144	132	410
		Expected Count	28.5	75.8	149.1	156.6	410.0
		% within University Groups	14.3%	18.5%	35.0%	32.2%	100.0%
Total		Count	123	232	464	506	1325
		Expected Count	123.0	232.0	464.0	506.0	1325.0
		% within University Groups	9.3%	17.5%	35.0%	38.2%	100.0%

Table B-13

University Groups *Crosstabulation* Critique are respectful and constructive (in studio discussions and final juries)							
			Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree	Total
University Groups	Private Est.	Count	20	63	162	182	427
		Expected Count	44.4	69.5	150.2	163.0	427.0
		% within University Groups	4.7%	14.8%	37.9%	42.6%	100.0%
	Private Emer.	Count	26	42	95	68	231
		Expected Count	24.0	37.6	81.2	88.2	231.0
		% within University Groups	11.3%	18.2%	41.1%	29.4%	100.0%
	Public Art	Count	53	39	71	95	258
		Expected Count	26.8	42.0	90.7	98.5	258.0
		% within University Groups	20.7%	15.1%	27.4%	36.6%	100.0%
	Public Eng.	Count	89	72	109	142	412
		Expected Count	42.8	67.0	144.9	157.3	412.0
		% within University Groups	21.9%	17.5%	26.2%	34.5%	100.0%
Total		Count	188	216	437	487	1328
		Expected Count	188.0	216.0	437.0	487.0	1328.0
		% within University Groups	14.2%	16.3%	32.9%	36.7%	100.0%

Table B-14

University Groups *Crosstabulation* Instructors accept diverse thinking							
Crosstabulation							
			Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree	Total
University Groups	Private Est.	Count	22	74	171	160	427
		Expected Count	49.6	92.7	163.6	121.1	427.0
		% within University Groups	5.2%	17.3%	40.0%	37.5%	100.0%
	Private Emer.	Count	40	61	90	39	230
		Expected Count	26.7	50.0	88.1	65.2	230.0
		% within University Groups	17.3%	26.5%	39.2%	17.0%	100.0%
	Public Art	Count	21	50	100	87	258
		Expected Count	30.0	56.0	98.8	73.2	258.0
		% within University Groups	8.2%	19.4%	38.7%	33.7%	100.0%
	Public Eng.	Count	59	103	159	90	411
		Expected Count	47.7	89.3	157.5	116.5	411.0
		% within University Groups	14.4%	25.1%	38.7%	21.9%	100.0%
Total		Count	142	288	520	376	1326
		Expected Count	142.0	288.0	520.0	376.0	1326.0
		% within University Groups	10.7%	21.7%	39.2%	28.4%	100.0%

Table B-15

University Groups *Crosstabulation* Support from administrative staff							
			Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree	Total
University Groups	Private Est.	Count	42	82	172	130	426
		Expected Count	64.4	108.1	144.1	109.4	426.0
		% within University Groups	9.9%	19.2%	40.3%	30.5%	100.0%
	Private Emer.	Count	25	50	95	61	231
		Expected Count	34.9	58.6	78.2	59.3	231.0
		% within University Groups	10.8%	21.6%	41.1%	26.8%	100.0%
	Public Art	Count	57	75	65	60	257
		Expected Count	38.8	65.2	87.0	66.0	257.0
		% within University Groups	22.2%	29.3%	25.3%	23.2%	100.0%
	Public Eng.	Count	85	128	109	88	410
		Expected Count	61.9	104.0	138.7	105.3	410.0
		% within University Groups	20.7%	31.2%	26.6%	21.5%	100.0%
Total		Count	209	335	441	339	1324
		Expected Count	209.0	335.0	441.0	339.0	1324.0
		% within University Groups	15.8%	25.4%	33.4%	25.5%	100.0%

Table B-16

University Groups *Crosstabulation* Positive communication with program director							
			Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree	Total
University Groups	Private Est.	Count	24	75	158	170	427
		Expected Count	60.1	85.6	148.6	132.8	427.0
		% within University Groups	5.6%	17.6%	37.0%	39.8%	100.0%
	Private Emer.	Count	65	63	56	44	228
		Expected Count	32.1	45.7	79.3	70.9	228.0
		% within University Groups	28.5%	27.6%	24.6%	19.3%	100.0%
	Public Art	Count	53	52	76	75	256
		Expected Count	36.0	51.3	89.1	79.6	256.0
		% within University Groups	20.7%	20.5%	29.6%	29.2%	100.0%
	Public Eng.	Count	64	95	140	112	411
		Expected Count	57.8	82.4	143.0	127.8	411.0
		% within University Groups	15.6%	23.1%	34.3%	27.3%	100.0%
Total		Count	206	285	430	401	1322
		Expected Count	206.0	285.0	430.0	401.0	1322.0
		% within University Groups	15.6%	21.6%	32.5%	30.3%	100.0%

Table B-17

University Groups *Crosstabulation* How satisfied with faculty's ability to provide inspiration?							
			Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree	Total
University Groups	Private Est.	Count	26	62	181	158	427
		Expected Count	48.3	86.6	160.7	131.4	427.0
		% within University Groups	6.1%	14.5%	42.4%	37.0%	100.0%
	Private Emer.	Count	34	50	83	64	231
		Expected Count	26.1	46.9	86.9	71.1	231.0
		% within University Groups	14.7%	21.6%	35.9%	27.7%	100.0%
	Public Art	Count	25	48	103	80	256
		Expected Count	29.0	51.9	96.3	78.8	256.0
		% within University Groups	9.8%	18.8%	40.2%	31.3%	100.0%
	Public Eng.	Count	50	122	142	98	412
		Expected Count	46.6	83.6	155.0	126.8	412.0
		% within University Groups	12.1%	29.6%	34.5%	23.8%	100.0%
Total		Count	135	282	509	400	1326
		Expected Count	135.0	282.0	509.0	400.0	1326.0
		% within University Groups	10.2%	21.3%	38.4%	30.2%	100.0%

Table B-18

University Groups * How satisfied with your choice of architecture at this university? Crosstabulation							
			Not at all/Strongly disagree	Only occasionally/Somewhat disagree	Somewhat frequently/Somewhat agree	Strongly agree	
University Groups	Private Est.	Count	26	59	159	182	426
		Expected Count	54.4	68.0	160.6	143.1	426.0
		% within University Groups	6.1%	13.8%	37.3%	42.7%	100.0%
	Private Str.	Count	51	46	80	53	230
		Expected Count	29.4	36.7	86.7	77.2	230.0
		% within University Groups	22.3%	20.0%	34.7%	23.0%	100.0%
	Public Art	Count	30	34	102	88	254
		Expected Count	32.4	40.5	95.7	85.3	254.0
		% within University Groups	11.9%	13.4%	40.1%	34.6%	100.0%
	Public Eng.	Count	55	71	161	119	406
		Expected Count	51.8	64.8	153.0	136.4	406.0
		% within University Groups	13.6%	17.5%	39.6%	29.3%	100.0%
Total	Count	151	219	504	442	1316	
	Expected Count	151.0	219.0	504.0	442.0	1316.0	
	% within University Groups	11.5%	16.6%	38.3%	33.6%	100.0%	

Table B-19

Appendix C

Correlation Matrix										
	art class	creative writing class	music/dance class	extra-curricular activities	Public library	encouraged to read	Visit to Museums/Art Center	family holidays	Father's education	Mother's education
Correlation	1.000	.565	.388	.426	.256	.410	.345	.355	.150	.282
	creative writing class	1.000	.428	.445	.339	.442	.393	.363	.202	.313
	music/dance class	.388	1.000	.439	.310	.287	.355	.383	.145	.247
	extra-curricular activities	.426	.439	1.000	.320	.410	.461	.450	.134	.264
	Public library	.256	.310	.320	1.000	.386	.497	.373	.119	.237
	encouraged to read	.410	.287	.410	.386	1.000	.468	.419	.250	.388
	Visit to Museums/Art	.345	.355	.461	.497	.468	1.000	.508	.164	.298
	family holidays	.355	.383	.450	.373	.419	.508	1.000	.178	.331
	Father's education	.150	.145	.134	.119	.250	.164	.178	1.000	.518
	Mother's education	.282	.313	.264	.237	.388	.298	.331	.518	1.000
Sig.	art class	.000	.000	.000	.000	.000	.000	.000	.000	.000
	creative writing class	.000	.000	.000	.000	.000	.000	.000	.000	.000
	music/dance class	.000	.000	.000	.000	.000	.000	.000	.000	.000
	extra-curricular activities	.000	.000	.000	.000	.000	.000	.000	.000	.000
	Public library	.000	.000	.000	.000	.000	.000	.000	.000	.000
	encouraged to read	.000	.000	.000	.000	.000	.000	.000	.000	.000
	cultural centers	.000	.000	.000	.000	.000	.000	.000	.000	.000
	family holidays	.000	.000	.000	.000	.000	.000	.000	.000	.000
	Father's education	.000	.000	.000	.000	.000	.000	.000	.000	.000
	Mother's education	.000	.000	.000	.000	.000	.000	.000	.000	.000

Table C-1

Cluster Students Perception of Taught Curriculum																				
Name of Subject	Cluster 1				Cluster 2				Cluster 3				Cluster 4							
	Strongly Emphasized	Moderately Emphasized	Slightly Emphasized	Not at all	Aggregated Score	Strongly Emphasized	Moderately Emphasized	Slightly Emphasized	Not at all	Aggregated Score	Strongly Emphasized	Moderately Emphasized	Slightly Emphasized	Not at all	Aggregated Score	Strongly Emphasized	Moderately Emphasized	Slightly Emphasized	Not at all	Aggregated Score
Design Manual	63.0%	25.0%	10.0%	2.0%	34.9%	76.0%	17.0%	6.0%	2.0%	36.9%	75.0%	15.0%	7.0%	3.0%	36.2%	88.0%	9.0%	2.0%	1.0%	38.4%
Presentation Skills	37.0%	38.0%	20.0%	4.0%	30.8%	42.0%	45.0%	12.0%	1.0%	32.8%	38.0%	41.0%	21.0%	2.0%	31.1%	51.0%	37.0%	10.0%	2.0%	33.7%
Computer aided Presentation Skills	37.0%	38.0%	20.0%	5.0%	30.7%	31.0%	41.0%	22.0%	6.0%	28.7%	22.0%	36.0%	32.0%	10.0%	27.0%	50.0%	40.0%	6.0%	4.0%	33.6%
Urban Design	24.0%	31.0%	21.0%	25.0%	25.6%	22.0%	42.0%	25.0%	11.0%	27.5%	16.0%	40.0%	25.0%	9.0%	24.3%	31.0%	50.0%	13.0%	6.0%	30.6%
Landscape Design	20.0%	22.0%	33.0%	26.0%	23.8%	31.0%	34.0%	28.0%	9.0%	29.1%	18.0%	38.0%	32.0%	11.0%	26.1%	52.0%	30.0%	16.0%	2.0%	33.2%
Architectural History	35.0%	20.0%	22.0%	23.0%	26.7%	47.0%	34.0%	16.0%	4.0%	32.6%	40.0%	36.0%	19.0%	5.0%	31.1%	45.0%	38.0%	15.0%	2.0%	32.6%
Structure & Construction	26.0%	38.0%	25.0%	11.0%	27.9%	39.0%	36.0%	29.0%	5.0%	32.7%	33.0%	26.0%	19.0%	12.0%	26.0%	48.0%	43.0%	6.0%	3.0%	33.6%
Interior Design	18.0%	34.0%	29.0%	19.0%	25.1%	33.0%	29.0%	29.0%	9.0%	28.6%	18.0%	33.0%	33.0%	16.0%	25.3%	46.0%	27.0%	21.0%	6.0%	31.3%
Environment Responsive Design	22.0%	36.0%	27.0%	14.0%	26.4%	36.0%	33.0%	24.0%	7.0%	29.8%	30.0%	35.0%	28.0%	7.0%	28.8%	53.0%	25.0%	19.0%	3.0%	32.8%
Architectural Practice	23.0%	32.0%	23.0%	22.0%	25.6%	37.0%	33.0%	18.0%	12.0%	28.5%	28.0%	32.0%	24.0%	18.0%	26.6%	61.0%	24.0%	11.0%	3.0%	34.1%

Table C-2

Cluster Students Perception of Curriculum Importance																				
Name of Subject	Cluster 1				Cluster 2				Cluster 3				Cluster 4							
	Very Important	Moderately Important	Slightly Important	Not Important	Aggregated Score	Very Important	Moderately Important	Slightly Important	Not Important	Aggregated Score	Very Important	Moderately Important	Slightly Important	Not Important	Aggregated Score	Very Important	Moderately Important	Slightly Important	Not Important	Aggregated Score
Design Manual	95.0%	4.0%	1.0%	0.0%	39.4%	90.0%	8.0%	2.0%	0.0%	38.8%	92.0%	7.0%	1.0%	0.0%	39.1%	94.0%	5.0%	1.0%	0.0%	39.3%
Presentation Skills	61.0%	33.0%	4.0%	3.0%	35.4%	66.0%	23.0%	10.0%	1.0%	35.4%	58.0%	32.0%	7.0%	3.0%	34.5%	70.0%	21.0%	8.0%	1.0%	36.0%
Computer aided presentation skills	64.0%	29.0%	6.0%	1.0%	35.6%	64.0%	28.0%	6.0%	1.0%	35.6%	62.0%	31.0%	5.0%	2.0%	35.3%	71.0%	24.0%	5.0%	1.0%	36.7%
Urban Design	43.0%	42.0%	12.0%	3.0%	32.5%	55.0%	38.0%	7.0%	2.0%	34.2%	45.0%	40.0%	9.0%	6.0%	32.4%	65.0%	30.0%	5.0%	2.0%	35.4%
Landscape Design	49.0%	38.0%	10.0%	3.0%	33.3%	56.0%	35.0%	8.0%	1.0%	34.6%	54.0%	37.0%	8.0%	1.0%	34.4%	62.0%	32.0%	5.0%	1.0%	35.5%
Architectural History	37.0%	38.0%	20.0%	5.0%	30.7%	56.0%	28.0%	13.0%	3.0%	33.7%	42.0%	37.0%	21.0%	0.0%	32.1%	62.0%	27.0%	8.0%	3.0%	34.8%
Structure & Construction	55.0%	28.0%	13.0%	4.0%	33.4%	71.0%	20.0%	8.0%	1.0%	36.1%	61.0%	31.0%	9.0%	0.0%	35.5%	74.0%	20.0%	5.0%	1.0%	36.7%
Interior Design	52.0%	27.0%	15.0%	6.0%	32.5%	53.0%	29.0%	13.0%	6.0%	33.1%	43.0%	36.0%	14.0%	7.0%	31.5%	55.0%	26.0%	11.0%	7.0%	32.7%
Environment Responsive Design	57.0%	29.0%	11.0%	4.0%	34.1%	64.0%	26.0%	7.0%	3.0%	35.1%	61.0%	28.0%	10.0%	1.0%	34.9%	76.0%	18.0%	4.0%	2.0%	36.8%
Architectural Practice	68.0%	17.0%	10.0%	5.0%	34.8%	71.0%	20.0%	5.0%	4.0%	35.8%	67.0%	23.0%	7.0%	3.0%	36.4%	67.0%	20.0%	10.0%	3.0%	35.1%

Table C-3

Cluster 1		
Subjects	Taught Curriculum	Important Curriculum
Design	35%	39%
Manual Presentation Skills	31%	35%
Computer aided presentation skills	31%	36%
Urban Design	26%	33%
Landscape Design	24%	33%
Architectural History	27%	31%
Structure & Construction	28%	33%
Interior Design	25%	33%
Environment Responsive Design	26%	34%
Architectural Practice	26%	35%

Table C-4

Cluster 2		
Subjects	Taught Curriculum	Important Curriculum
Design	37%	39%
Manual Presentation Skills	33%	35%
Computer aided presentation skills	30%	36%
Urban Design	28%	34%
Landscape Design	29%	35%
Architectural History	33%	34%
Structure & Construction	33%	36%
Interior Design	29%	33%
Environment Responsive Design	30%	35%
Architectural Practice	30%	36%

Table C-5

Cluster 3		
Subjects	Taught Curriculum	Important Curriculum
Design	36%	39%
Manual Presentation Skills	31%	35%
Computer aided presentation skills	27%	35%
Urban Design	24%	32%
Landscape Design	26%	34%
Architectural History	31%	32%
Structure & Construction	26%	36%
Interior Design	25%	32%
Environment Responsive Design	29%	35%
Architectural Practice	27%	35%

Table C-6

Cluster 4		
Subjects	Taught Curriculum	Important Curriculum
Design	38%	39%
Manual Presentation Skills	34%	36%
Computer aided presentation skills	34%	37%
Urban Design	31%	35%
Landscape Design	33%	36%
Architectural History	33%	35%
Structure & Construction	34%	37%
Interior Design	31%	33%
Environment Responsive Design	33%	37%
Architectural Practice	34%	35%

Table C-7

Cross-Tabulation Responses of cultural capital clusters to different aspects of hidden curriculum

Cultural Capital Clusters *Crosstabulation* School is conducive environment for new ideas							
			Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree	Total
Clusters	4	Count	28	68	167	249	512
		Expected Count	35.6	94.7	186.3	195.5	512.0
		% within Clusters	5.7%	13.3%	32.6%	48.4%	100.0%
	3	Count	14	36	94	66	210
		Expected Count	15.6	38.8	75.4	80.2	210.0
		% within Clusters	7.2%	17.1%	44.2%	31.4%	100.0%
	2	Count	18	37	80	85	220
		Expected Count	15.3	40.7	80.0	84.0	220.0
		% within Clusters	8.2%	16.8%	36.4%	38.6%	100.0%
	1	Count	42	104	134	97	383
		Expected Count	26.6	70.8	139.3	146.3	383.0
		% within Clusters	13.0%	27.2%	34.6%	25.3%	100.0%
Total		Count	102	245	475	497	1325
		% within Clusters	7.8%	18.5%	35.8%	37.8%	100.0%

Table C-8

Cultural Capital Clusters *Crosstabulation* Critique are respectful and constructive (in studio discussions and final juries)							
			Not at All	Only Occasionally	Somewhat Frequently	Very Frequently	Total
Clusters	4	Count	47	52	195	218	512
		Expected Count	53.2	83.3	180.0	195.5	512.0
		% within Clusters	9.5%	10.9%	37.4%	42.3%	100.0%
	3	Count	40	38	60	72	210
		Expected Count	21.8	34.2	73.8	80.2	210.0
		% within Clusters	19.0%	18.1%	28.6%	34.3%	100.0%
	2	Count	36	35	81	70	222
		Expected Count	23.1	36.1	78.1	84.8	222.0
		% within Clusters	16.3%	15.8%	36.5%	31.4%	100.0%
	1	Count	48	153	88	95	384

		Expected Count	39.9	62.5	135.0	146.6	384.0
		% within Clusters	13.1%	40.1%	22.3%	24.6%	100.0%
Total		Count	171	278	424	455	1328
		% within Clusters	12.9%	20.9%	31.9%	34.3%	100.0%

Table C-9

Cultural Capital Clusters *Crosstabulation* Instructors accept diverse thinking Crosstabulation							
			Not at All	Only Occasionally	Somewhat Frequently	Very Frequently	
Clusters	4	Count	30	67	204	211	512
		Expected Count	59.5	111.2	196.2	145.2	512.0
		% within Clusters	5.9%	13.2%	39.8%	41.1%	100.0%
	3	Count	25	52	80	53	210
		Expected Count	24.4	45.6	80.5	59.5	210.0
		% within Clusters	11.9%	24.8%	38.1%	25.2%	100.0%
	2	Count	30	40	91	60	221
		Expected Count	25.7	48.0	84.7	62.7	221.0
		% within Clusters	13.6%	18.1%	41.2%	27.1%	100.0%
	1	Count	88	108	114	73	383
		Expected Count	44.5	83.2	146.7	108.6	383.0
		% within Clusters	23.0%	28.2%	29.7%	19.1%	100.0%
Total		Count	173	267	489	397	1326
		% within Clusters	13.0%	20.1%	36.9%	29.9%	100.0%

Table C-10

Cultural Capital Clusters *Crosstabulation* Support from administrative staff							
			Not at All	Only Occasionally	Somewhat Frequently	Very Frequently	
Clusters	4	Count	54	121	168	167	510
		Expected Count	77.0	129.4	172.6	131.0	510.0
		% within Clusters	10.6%	23.7%	32.9%	32.7%	100.0%
	3	Count	23	62	74	50	209
		Expected Count	31.6	53.0	70.7	53.7	209.0

		% within Clusters	11.3%	29.7%	35.4%	23.7%	100.0%
	2	Count	35	52	63	71	221
		Expected Count	33.4	56.1	74.8	56.8	221.0
		% within Clusters	15.8%	23.5%	28.3%	32.4%	100.0%
	1	Count	74	101	128	81	384
		Expected Count	58.0	97.5	129.9	98.6	384.0
		% within Clusters	19.4%	26.3%	33.3%	21.0%	100.0%
Total		Count	186	336	448	369	1324
		% within Clusters	14.0%	25.3%	33.0%	27.6%	100.0%

Table C-11

Cultural Capital Clusters *Crosstabulation* Positive communication with program director							
			Not at All	Only Occasionally	Somewhat Frequently	Very Frequently	
Clusters	4	Count	71	84	181	174	510
		Expected Count	71.8	102.2	177.5	158.6	510.0
		% within Clusters	14.0%	16.5%	35.5%	34.0%	100.0%
	3	Count	30	44	78	57	209
		Expected Count	29.4	41.9	72.7	65.0	209.0
		% within Clusters	14.4%	21.1%	37.3%	27.3%	100.0%
	2	Count	28	45	70	77	220
		Expected Count	31.0	44.1	76.6	68.4	220.0
		% within Clusters	12.7%	20.5%	31.8%	35.0%	100.0%
	1	Count	105	92	93	93	383
		Expected Count	53.9	76.8	133.3	119.1	383.0
		% within Clusters	27.7%	24.0%	24.2%	24.1%	100.0%
Total		Count	234	265	422	401	1322
		% within Clusters	17.7%	20.0%	31.9%	30.3%	100.0%

Table C-12

Cultural Capita Clusters *Crosstabulation* How satisfied with faculty's ability to provide inspiration?							
			Not at All	Only Occasionally	Somewhat Frequently	Very Frequently	
Clusters	4	Count	58	88	187	179	512
		Expected Count	57.9	103.9	192.7	157.5	512.0
		% within Clusters	10.6%	17.2%	36.5%	35.6%	100.0%
	3	Count	27	37	77	68	209
		Expected Count	23.6	42.4	78.7	64.3	209.0
		% within Clusters	12.9%	17.9%	36.8%	32.3%	100.0%
	2	Count	18	30	99	74	221
		Expected Count	25.0	44.8	83.2	68.0	221.0
		% within Clusters	8.1%	13.6%	44.8%	33.5%	100.0%
	1	Count	71	63	97	153	384
		Expected Count	43.4	77.9	144.5	118.2	384.0
		% within Clusters	18.5%	16.3%	25.4%	39.8%	100.0%
Total		Count	174	218	460	474	1326
		% within Clusters	13.2%	16.4%	34.6%	35.8%	100.0%

Table C-13

Cross-Tabulation Responses of cultural capital clusters to Personal Performance and Satisfaction

Cultural Capital Clusters *Crosstabulation* How satisfied you are with your performance in architectural school?							
			Not at all	Slightly	Moderately	Strongly	
Clusters	4	Count	16	54	246	197	513
		Expected Count	25.5	83.9	263.3	140.3	513.0
		% within Clusters	3.1%	10.5%	48.0%	38.4%	100.0%
	3	Count	4	54	108	44	210
		Expected Count	10.4	34.3	107.8	57.4	210.0
		% within Clusters	1.9%	25.7%	51.4%	21.0%	100.0%
	2	Count	23	34	105	59	221
		Expected Count	11.0	36.1	113.4	60.5	221.0
		% within Clusters	10.4%	15.5%	47.4%	26.7%	100.0%
	1	Count	64	118	138	63	383
		Expected Count	19.0	62.6	196.6	104.8	383.0
		% within Clusters	16.8%	30.8%	36.0%	16.4%	100.0%
Total		Count	107	260	597	363	1327
		% within Clusters	8.1%	19.6%	44.9%	27.4%	100.0%

Table C-14

Cultural Capital Clusters *Crosstabulation* How confident you feel in the beginning of a new project?							
			Not at all	Slightly	Moderately	Strongly	
Clusters	4	Count	30	45	188	248	511
		Expected Count	40.8	84.7	188.7	196.8	511.0
		% within Clusters	5.9%	8.9%	36.9%	48.3%	100.0%
	3	Count	17	41	90	61	209
		Expected Count	16.7	34.6	77.2	80.5	209.0
		% within Clusters	8.1%	19.6%	43.1%	29.2%	100.0%
	2	Count	14	37	83	88	222
		Expected Count	17.7	36.8	82.0	85.5	222.0
		% within Clusters	6.3%	16.7%	37.4%	39.6%	100.0%
	1	Count	76	134	99	76	385

		Expected Count	30.8	63.8	142.2	148.3	385.0
		% within Clusters	19.7%	34.7%	25.7%	19.9%	100.0%
Total		Count	137	257	460	473	1327
		% within Clusters	10.2%	19.4%	34.7%	35.6%	100.0%

Table C-15

Cultural Capital Clusters *Crosstabulation* How willing you are to try out new ideas in design studio?							
			Not at all	Slightly	Moderately	Strongly	
Clusters	4	Count	13	27	142	330	512
		Expected Count	32.8	42.0	153.1	284.1	512.0
		% within Clusters	2.5%	5.3%	27.7%	64.5%	100.0%
	3	Count	12	16	69	112	209
		Expected Count	13.4	17.2	62.5	116.0	209.0
		% within Clusters	5.7%	7.7%	33.0%	53.6%	100.0%
	2	Count	12	18	66	126	222
		Expected Count	14.2	18.2	66.4	123.2	222.0
		% within Clusters	5.4%	8.1%	29.7%	56.8%	100.0%
	1	Count	48	48	120	169	385
		Expected Count	24.6	31.6	115.1	213.7	385.0
		% within Clusters	12.5%	12.5%	31.2%	43.9%	100.0%
Total		Count	85	109	397	737	1328
		% within Clusters	6.4%	8.2%	29.9%	55.5%	100.0%

Table C-16

Cultural Capital Clusters *Crosstabulation* How much you think you are dependent on the guidance provided by teachers?							
			Not at all	Slightly	Moderately	Strongly	
Clusters	4	Count	113	187	109	102	511
		Expected Count	87.3	120.1	162.8	140.8	511.0
		% within Clusters	22.1%	36.6%	21.3%	20.0%	100.0%
	3	Count	7	51	88	64	210
		Expected Count	15.3	49.3	87.4	57.9	210.0
		% within Clusters	3.3%	24.3%	41.9%	30.5%	100.0%
	2	Count	15	46	96	65	222

		Expected Count	16.2	52.2	92.4	61.2	222.0
		% within Clusters	6.8%	20.7%	43.2%	29.3%	100.0%
	1	Count	13	64	173	135	385
		Expected Count	28.1	90.5	160.3	106.1	385.0
		% within Clusters	3.4%	16.5%	45.0%	35.1%	100.0%
Total		Count	148	348	466	366	1328
		% within Clusters	11.1%	26.2%	35.1%	27.6%	100.0%

Table C-17

Cultural Capital Clusters *Crosstabulation* You feel confident in interacting with fellow students in the school?							
			Not at all	Slightly	Moderately	Strongly	
Clusters	4	Count	17	44	143	309	513
		Expected Count	33.2	60.6	166.9	252.3	513.0
		% within Clusters	3.3%	8.6%	27.9%	60.2%	100.0%
	3	Count	14	30	77	89	210
		Expected Count	13.6	24.8	68.3	103.3	210.0
		% within Clusters	6.7%	14.3%	36.7%	42.4%	100.0%
	2	Count	17	27	67	110	221
		Expected Count	14.3	26.1	71.9	108.7	221.0
		% within Clusters	7.5%	12.2%	30.3%	49.9%	100.0%
	1	Count	57	56	145	126	384
		Expected Count	45.9	35.4	160.9	141.8	384.0
		% within Clusters	14.7%	14.6%	37.8%	32.9%	100.0%
Total		Count	105	157	432	634	1328
		% within Clusters	7.9%	11.8%	32.5%	47.7%	100.0%

Table C-18

Cultural Capital Clusters *Crosstabulation* You feel comfortable working in the studio for long hours?							
							Total
			Not at all	Slightly	Moderately	Strongly	
Clusters	4	Count	45	72	162	234	513
		Expected Count	82.2	97.3	164.4	169.1	513.0
		% within Clusters	8.8%	14.0%	31.6%	45.6%	100.0%
	3	Count	37	41	73	59	210

		Expected Count	33.7	39.8	67.3	69.2	210.0
		% within Clusters	17.6%	19.7%	34.8%	27.9%	100.0%
	2	Count	33	45	75	69	222
		Expected Count	35.6	42.1	71.2	73.2	222.0
		% within Clusters	14.9%	20.3%	33.8%	31.1%	100.0%
	1	Count	98	81	116	89	384
		Expected Count	61.5	72.8	123.1	126.6	384.0
		% within Clusters	25.5%	21.1%	30.2%	23.2%	100.0%
	Total	Count	213	239	426	451	1329
% within Clusters		16.0%	18.0%	32.1%	34.0%	100.0%	

Table C-19

Cultural Capital Clusters *Crosstabulation* You feel more comfortable with architectural environment as compare to 1st year?							
			Not at all	Slightly	Moderately	Strongly	Total
Clusters	4	Count	27	48	126	289	490
		Expected Count	54.0	63.6	153.5	218.9	490.0
		% within Clusters	5.5%	9.8%	25.7%	59.0%	100.0%
	3	Count	21	28	73	81	203
		Expected Count	22.1	26.1	63.0	91.7	203
		% within Clusters	10.3%	13.8%	36.0%	39.9%	100.0%
	2	Count	29	28	68	82	207
		Expected Count	20.4	24.6	71.9	90.1	207
		% within Clusters	14.0%	13.6%	32.9%	39.6%	100.0%
	1	Count	78	75	95	112	360
		Expected Count	45.5	47.7	102.6	164.2	360
		% within Clusters	21.6%	20.8%	26.4%	31.3%	100.0%
Total	Count	155	179	362	564	1260	
	% within Clusters	12.3%	14.2%	28.7%	44.8%	100.0%	

Table C-20

Cross-Tabulation Responses of students' positions (according to their cultural capital group and institutional habitus membership) to hidden curriculum and Personal Performance and Satisfaction

Students Positions *Crosstabulation* School is conducive environment for new ideas							
			Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree	Total
Students Positions	High-A	Count	4	28	79	129	240
		% within Students Positions	1.7%	11.7%	32.9%	53.8%	100.0%
	High-B	Count	4	10	23	19	56
		% within Students Positions	7.1%	17.9%	41.1%	33.9%	100.0%
	High-C	Count	4	17	28	69	118
		% within Students Positions	3.4%	14.4%	23.7%	58.5%	100.0%
	High-D	Count	7	13	37	41	98
		% within Students Positions	7.1%	13.3%	37.8%	41.8%	100.0%
	Low-A	Count	1	15	20	21	57
		% within Students Positions	1.8%	26.3%	35.1%	36.8%	100.0%
	Low-B	Count	22	33	15	23	93
		% within Students Positions	23.6%	35.4%	16.1%	24.7%	100.0%
	Low-C	Count	7	13	20	21	61
		% within Students Positions	11.5%	21.3%	32.7%	34.5%	100.0%
	Low-D	Count	33	43	50	46	172
		% within Students Positions	18.7%	25.0%	29.5%	26.7%	100.0%
	Middle-A	Count	5	15	53	57	130
		% within Students Positions	3.8%	11.5%	40.8%	43.8%	100.0%
	Middle-B	Count	3	20	37	21	81
		% within Students Positions	3.7%	24.7%	45.7%	25.9%	100.0%
Middle-C	Count	7	18	26	28	79	
	% within Students Positions	8.9%	22.8%	32.9%	35.4%	100.0%	
Middle-D	Count	16	20	59	45	140	

		% within Students Positions	11.4%	14.3%	42.1%	32.1%	100.0%
Total		Count	113	245	447	520	1325
		% within Students Positions	8.5%	18.5%	33.7%	39.3%	100.0%

Table C-21

Students Positions *Crosstabulation* Critique are respectful and constructive (in studio discussions and final juries)							
			Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree	Total
Students Positions	High-A	Count	4	37	96	103	240
		% within Students Positions	1.7%	15.4%	40.0%	42.9%	100.0%
	High-B	Count	7	10	18	21	56
		% within Students Positions	12.5%	17.9%	32.1%	37.5%	100.0%
	High-C	Count	6	7	32	73	118
		% within Students Positions	5.1%	5.9%	27.1%	61.9%	100.0%
	High-D	Count	11	12	35	40	98
		% within Students Positions	11.2%	12.2%	35.7%	40.8%	100.0%
	Low-A	Count	10	12	20	18	60
		% within Students Positions	16.0%	20.0%	33.7%	30.1%	100.0%
	Low-B	Count	18	25	24	30	97
		% within Students Positions	18.9%	25.7%	24.1%	31.0%	100.0%
	Low-C	Count	17	25	10	9	61
		% within Students Positions	27.9%	40.9%	16.4%	14.8%	100.0%
	Low-D	Count	40	60	37	29	166
		% within Students Positions	24.1%	36.1%	22.3%	17.6%	100.0%
	Middle-A	Count	16	18	42	54	130
		% within Students Positions	12.3%	13.8%	32.3%	41.4%	100.0%
	Middle-B	Count	15	11	39	16	81
		% within Students Positions	18.2%	13.6%	48.3%	19.7%	100.0%
		Count	10	18	26	25	79

	Middle-C	% within Students Positions	12.6%	22.8%	33.0%	31.6%	100.0%
	Middle-D	Count	25	26	43	48	142
		% within Students Positions	17.5%	18.3%	30.2%	33.7%	100.0%
Total		Count	179	261	422	466	1328
		% within Students Positions	13.7%	19.7%	31.8%	35.1%	100.0%

Table C-22

Students Positions *Crosstabulation* Instructors accept diverse thinking							
			Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree	Total
Students Positions	High-A	Count	6	36	98	100	240
		% within Students Positions	2.5%	15.0%	40.8%	41.7%	100.0%
	High-B	Count	3	17	28	8	56
		% within Students Positions	5.4%	30.4%	50.0%	14.3%	100.0%
	High-C	Count	10	10	36	62	118
		% within Students Positions	8.5%	8.5%	30.5%	52.5%	100.0%
	High-D	Count	11	25	42	20	98
		% within Students Positions	11.2%	25.5%	42.9%	20.4%	100.0%
	Low-A	Count	14	16	12	15	57
		% within Students Positions	24.6%	28.6%	21.0%	26.3%	100.0%
	Low-B	Count	28	32	20	13	93
		% within Students Positions	30.1%	34.5%	21.5%	14.0%	100.0%
	Low-C	Count	8	14	29	10	61
		% within Students Positions	13.6%	22.9%	47.7%	16.5%	100.0%
	Low-D	Count	25	57	53	37	172

		% within Students Positions	14.5%	32.9%	30.6%	21.5%	100.0%
	Middle-A	Count	10	24	53	43	130
		% within Students Positions	7.7%	18.5%	40.8%	33.1%	100.0%
	Middle-B	Count	5	19	39	18	81
		% within Students Positions	6.2%	23.5%	48.1%	22.2%	100.0%
	Middle-C	Count	7	18	25	29	79
		% within Students Positions	8.8%	22.8%	31.6%	36.7%	100.0%
	Middle-D	Count	23	31	54	33	141
		% within Students Positions	16.3%	22.0%	38.3%	23.4%	100.0%
Total		Count	150	299	489	388	1326
		% within Students Positions	11.3%	22.5%	36.9%	29.2%	100.0%

Table C-23

Students Positions *Crosstabulation* Support from administrative staff							
			Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree	Total
Students Positions	High-A	Count	20	47	97	75	239
		% within Students Positions	8.4%	19.7%	40.6%	31.4%	100.0%
	High-B	Count	11	10	20	15	56
		% within Students Positions	19.6%	17.9%	35.7%	26.8%	100.0%
	High-C	Count	13	19	32	53	117
		% within Students Positions	11.1%	16.2%	27.4%	45.3%	100.0%
	High-D	Count	10	36	28	24	98
		% within Students Positions	10.2%	36.7%	28.6%	24.5%	100.0%
	Low-A	Count	4	15	16	22	57
		% within Students Positions	7.0%	26.3%	28.1%	38.6%	100.0%
	Low-B	Count	12	20	34	28	94
		% within Students Positions	12.7%	21.3%	36.2%	29.9%	100.0%
	Low-C	Count	25	19	13	4	61

		% within Students Positions	41.0%	31.1%	21.3%	6.6%	100.0%
Low-D	Count		65	57	20	30	172
	% within Students Positions		37.9%	33.0%	11.6%	17.6%	100.0%
Middle-A	Count		19	21	48	42	130
	% within Students Positions		14.6%	16.2%	36.9%	32.3%	100.0%
Middle-B	Count		7	11	38	25	81
	% within Students Positions		8.6%	13.6%	46.9%	30.9%	100.0%
Middle-C	Count		19	22	20	18	79
	% within Students Positions		24.1%	27.8%	25.3%	22.8%	100.0%
Middle-D	Count		35	40	26	39	140
	% within Students Positions		25.1%	28.6%	18.6%	27.9%	100.0%
Total	Count		240	317	392	375	1324
	% within Students Positions		18.1%	23.9%	29.6%	28.3%	100.0%

Table C-24

Students Positions *Crosstabulation* Positive communication with program director							
			Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree	
Students Positions	High-A	Count	9	33	90	108	240
		% within Students Positions	3.8%	13.8%	37.5%	45.0%	100.0%
	High-B	Count	17	15	13	11	56
		% within Students Positions	30.4%	26.8%	23.2%	19.6%	100.0%
	High-C	Count	9	10	40	57	116
		% within Students Positions	7.8%	8.6%	34.5%	49.1%	100.0%
	High-D	Count	6	26	38	28	98
		% within Students Positions	6.1%	26.5%	38.8%	28.6%	100.0%
	Low-A	Count	15	14	12	16	57
		% within Students Positions	26.3%	24.6%	21.0%	28.1%	100.0%
	Low-B	Count	38	29	14	11	92

		% within Students Positions	41.2%	31.5%	15.3%	12.0%	100.0%
	Low-C	Count	15	10	26	10	61
		% within Students Positions	24.5%	16.4%	42.6%	16.4%	100.0%
	Low-D	Count	33	39	61	40	173
		% within Students Positions	19.1%	22.5%	35.3%	23.1%	100.0%
	Middle-A	Count	5	28	47	50	130
		% within Students Positions	3.8%	21.5%	36.2%	38.5%	100.0%
	Middle-B	Count	20	19	19	22	80
		% within Students Positions	25.0%	23.8%	23.8%	27.5%	100.0%
	Middle-C	Count	19	12	30	18	79
		% within Students Positions	24.1%	15.2%	38.0%	22.8%	100.0%
	Middle-D	Count	14	30	52	44	140
		% within Students Positions	10.0%	21.4%	37.1%	31.4%	100.0%
Total		Count	200	265	442	415	1322
		% within Students Positions	15.1%	20.0%	33.4%	31.4%	100.0%

Table C-25

Students Positions *Crosstabulation* How satisfied with faculty's ability to provide inspiration?							
			Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree	Total
Students Positions	High-A	Count	12	31	91	106	240
		% within Students Positions	5.0%	12.9%	37.9%	44.2%	100.0%
	High-B	Count	9	10	23	14	56
		% within Students Positions	16.1%	17.9%	41.1%	25.0%	100.0%
	High-C	Count	9	17	38	54	118
		% within Students Positions	7.6%	14.4%	32.2%	45.8%	100.0%
	High-D	Count	4	30	35	29	98
		% within Students Positions	4.1%	30.6%	35.7%	29.6%	100.0%
	Low-A	Count	7	9	17	24	57

		% within Students Positions	12.3%	15.7%	29.9%	42.1%	100.0%
	Low-B	Count	17	15	22	40	94
		% within Students Positions	18.1%	15.9%	23.6%	42.6%	100.0%
	Low-C	Count	10	13	20	17	60
		% within Students Positions	16.0%	21.3%	34.3%	28.3%	100.0%
	Low-D	Count	30	49	39	55	173
		% within Students Positions	17.4%	28.4%	22.3%	31.8%	100.0%
	Middle-A	Count	7	19	65	39	130
		% within Students Positions	5.4%	14.6%	50.0%	30.0%	100.0%
	Middle-B	Count	8	8	27	38	81
		% within Students Positions	9.9%	9.9%	33.3%	46.9%	100.0%
	Middle-C	Count	14	17	30	17	78
		% within Students Positions	17.9%	21.8%	38.5%	21.8%	100.0%
	Middle-D	Count	16	23	54	48	141
		% within Students Positions	11.3%	16.3%	38.3%	34.2%	100.0%
Total		Count	143	241	461	481	1326
		% within Students Positions	10.8%	18.2%	34.8%	36.3%	100.0%

Table C-26

Students Positions *Crosstabulation* How satisfied you are with your general performance in architectural school?							
			Not at all	Slightly	Moderately	Strongly	Total
Students Positions	High-A	Count	1	15	130	94	240
		% within Students Positions	0.4%	6.3%	54.2%	39.2%	100.0%
	High-B	Count	5	7	30	15	57
		% within Students Positions	8.8%	12.3%	52.6%	26.3%	100.0%
	High-C	Count	7	12	39	60	118
		% within Students Positions	5.9%	10.2%	33.1%	50.8%	100.0%
High-D	Count	3	20	47	28	98	

		% within Students Positions	3.1%	20.4%	48.0%	28.6%	100.0%
Low-A	Count		10	21	20	5	56
	% within Students Positions		17.8%	37.5%	35.7%	8.9%	100.0%
Low-B	Count		16	16	39	23	94
	% within Students Positions		17.4%	17.0%	41.1%	24.5%	100.0%
Low-C	Count		16	11	28	5	60
	% within Students Positions		26.7%	18.3%	46.6%	8.3%	100.0%
Low-D	Count		31	38	74	30	173
	% within Students Positions		17.9%	22.0%	42.8%	17.3%	100.0%
Middle-A	Count		3	21	81	25	130
	% within Students Positions		2.3%	16.2%	62.3%	19.2%	100.0%
Middle-B	Count		5	5	49	22	81
	% within Students Positions		6.2%	6.2%	60.5%	27.2%	100.0%
Middle-C	Count		6	20	33	20	79
	% within Students Positions		7.6%	25.3%	41.8%	25.3%	100.0%
Middle-D	Count		2	29	74	36	141
	% within Students Positions		1.4%	20.6%	52.5%	25.5%	100.0%
Total	Count		105	215	644	363	1327
	% within Students Positions		7.9%	16.2%	48.5%	27.4%	100.0%

Table C-27

Students Positions *Crosstabulation* How confident you feel in the beginning of a new project?							
			Not at all	Slightly	Moderately	Strongly	Total
Students Positions	High-A	Count	15	33	84	107	239
		% within Students Positions	6.3%	13.8%	35.1%	44.8%	100.0%
	High-B	Count	1	9	28	18	56
		% within Students Positions	1.8%	16.1%	50.0%	32.1%	100.0%
	High-C	Count	9	11	27	71	118
		% within Students Positions					

		% within Students Positions	7.6%	9.3%	22.9%	60.2%	100.0%
High-D	Count		5	13	29	51	98
	% within Students Positions		5.1%	13.3%	29.6%	52.0%	100.0%
Low-A	Count		16	21	15	5	57
	% within Students Positions		28.1%	36.9%	26.4%	8.7%	100.0%
Low-B	Count		17	37	18	22	94
	% within Students Positions		18.0%	39.4%	19.1%	23.4%	100.0%
Low-C	Count		21	15	11	14	61
	% within Students Positions		34.4%	24.6%	18.0%	23.0%	100.0%
Low-D	Count		22	61	55	35	173
	% within Students Positions		12.7%	35.3%	31.9%	20.2%	100.0%
Middle-A	Count		13	24	55	38	130
	% within Students Positions		10.0%	18.5%	42.3%	29.2%	100.0%
Middle-B	Count		3	10	34	34	81
	% within Students Positions		3.7%	12.3%	42.0%	42.0%	100.0%
Middle-C	Count		12	16	23	28	79
	% within Students Positions		15.2%	20.3%	29.1%	35.4%	100.0%
Middle-D	Count		3	28	61	49	141
	% within Students Positions		2.1%	19.9%	43.3%	34.8%	100.0%
Total	Count		137	278	440	472	1327
	% within Students Positions		10.3%	20.9%	33.2%	35.6%	100.0%

Table C-28

Students Positions *Crosstabulation* How willing you are to try out new ideas in design studio?							
			Not at all	Slightly	Moderately	Strongly	Total
Students Positions	High-A	Count	1	11	64	164	240
		% within Students Positions	0.4%	4.6%	26.7%	68.3%	100.0%
	High-B	Count	2	4	15	36	57

		% within Students Positions	3.5%	7.0%	26.3%	63.2%	100.0%
	High-C	Count	8	3	30	76	117
		% within Students Positions	6.8%	2.6%	25.6%	65.0%	100.0%
	High-D	Count	2	9	33	54	98
		% within Students Positions	2.0%	9.2%	33.7%	55.1%	100.0%
	Low-A	Count	5	4	18	30	57
		% within Students Positions	8.8%	7.0%	31.6%	52.6%	100.0%
	Low-B	Count	8	13	28	45	94
		% within Students Positions	8.5%	13.8%	29.8%	47.9%	100.0%
	Low-C	Count	12	9	10	30	61
		% within Students Positions	19.6%	14.8%	16.4%	49.2%	100.0%
	Low-D	Count	10	12	64	87	173
		% within Students Positions	5.8%	6.9%	37.0%	50.2%	100.0%
	Middle-A	Count	4	15	34	77	130
		% within Students Positions	3.1%	11.5%	26.2%	59.2%	100.0%
	Middle-B	Count	4	6	32	39	81
		% within Students Positions	4.9%	7.4%	39.5%	48.1%	100.0%
	Middle-C	Count	13	4	19	42	78
		% within Students Positions	16.7%	5.1%	24.4%	53.8%	100.0%
	Middle-D	Count	3	9	50	80	142
		% within Students Positions	2.1%	6.3%	35.2%	56.3%	100.0%
Total		Count	72	99	397	760	1328
		% within Students Positions	5.4%	7.5%	29.9%	57.2%	100.0%

Table C-29

Students Positions *Crosstabulation* How much you think you are dependent on the guidance provided by teachers?							
			Not at all	Slightly	Moderately	Strongly	Total
Students Positions	High-A	Count	54	93	50	41	238
		% within Students Positions	22.7%	39.0%	21.1%	17.2%	100.0%
	High-B	Count	13	25	10	9	57
		% within Students Positions	22.8%	43.8%	17.5%	15.7%	100.0%
	High-C	Count	31	31	35	21	118
		% within Students Positions	26.3%	26.3%	29.7%	17.8%	100.0%
	High-D	Count	15	38	14	31	98
		% within Students Positions	15.3%	38.6%	14.3%	31.4%	100.0%
	Low-A	Count	1	9	33	14	57
		% within Students Positions	1.8%	15.6%	57.9%	24.6%	100.0%
	Low-B	Count	4	17	34	39	94
		% within Students Positions	4.3%	18.1%	36.2%	41.5%	100.0%
	Low-C	Count	0	12	19	30	61
		% within Students Positions	0.0%	19.5%	31.3%	49.2%	100.0%
	Low-D	Count	8	26	87	52	173
		% within Students Positions	4.6%	15.1%	50.2%	30.1%	100.0%
	Middle-A	Count	7	29	58	36	130
		% within Students Positions	5.4%	22.3%	44.6%	27.7%	100.0%
	Middle-B	Count	4	21	33	23	81
		% within Students Positions	4.9%	25.9%	40.7%	28.4%	100.0%
Middle-C	Count	5	18	29	27	79	
	% within Students Positions	6.3%	22.8%	36.7%	34.2%	100.0%	
Middle-D	Count	6	29	64	43	142	

		% within Students Positions	4.2%	20.4%	45.1%	30.3%	100.0%
Total		Count	148	348	466	366	1328
		% within Students Positions	11.1%	26.2%	35.1%	27.6%	100.0%

Table C-30

Students Positions *Crosstabulation* You feel confident in interacting with fellow students in the school?							
			Not at all	Slightly	Moderately	Strongly	Total
Students Positions	High-A	Count	4	20	76	140	240
		% within Students Positions	1.7%	8.3%	31.7%	58.3%	100.0%
	High-B	Count	3	5	20	29	57
		% within Students Positions	5.3%	8.8%	35.1%	50.9%	100.0%
	High-C	Count	7	6	28	77	118
		% within Students Positions	5.9%	5.1%	23.7%	65.3%	100.0%
	High-D	Count	3	7	25	63	98
		% within Students Positions	3.1%	7.1%	25.5%	64.3%	100.0%
	Low-A	Count	9	7	21	20	57
		% within Students Positions	15.8%	12.3%	36.8%	35.1%	100.0%
	Low-B	Count	12	11	39	32	94
		% within Students Positions	12.8%	11.7%	41.5%	34.3%	100.0%
	Low-C	Count	13	11	19	17	60
		% within Students Positions	21.9%	18.0%	31.6%	28.8%	100.0%
	Low-D	Count	19	17	76	61	173
		% within Students Positions	10.9%	9.8%	43.9%	35.3%	100.0%
	Middle-A	Count	6	19	41	64	130
		% within Students Positions	4.6%	14.6%	31.5%	49.2%	100.0%
	Middle-B	Count	4	10	29	38	81

		% within Students Positions	4.9%	12.3%	35.8%	46.9%	100.0%
	Middle-C	Count	10	13	27	28	78
		% within Students Positions	12.8%	16.7%	34.6%	35.9%	100.0%
	Middle-D	Count	11	15	47	69	142
		% within Students Positions	7.7%	10.6%	33.1%	48.5%	100.0%
Total		Count	101	141	448	638	1328
		% within Students Positions	7.6%	10.6%	33.7%	48.0%	100.0%

Table C-31

Students Positions *Crosstabulation* You feel comfortable working in the studio for long hours?							
			Not at all	Slightly	Moderately	Strongly	Total
Students Positions	High-A	Count	9	27	77	127	240
		% within Students Positions	3.8%	11.3%	32.1%	52.9%	100.0%
	High-B	Count	5	3	25	24	57
		% within Students Positions	8.8%	5.0%	43.9%	42.3%	100.0%
	High-C	Count	19	18	30	51	118
		% within Students Positions	16.1%	15.3%	25.4%	43.2%	100.0%
	High-D	Count	12	19	30	37	98
		% within Students Positions	12.2%	19.4%	30.6%	37.8%	100.0%
	Low-A	Count	4	13	24	16	57
		% within Students Positions	7.6%	22.1%	42.1%	28.1%	100.0%
	Low-B	Count	5	17	31	41	94
		% within Students Positions	5.3%	18.1%	33.0%	43.6%	100.0%
	Low-C	Count	21	16	11	13	61
		% within Students Positions	34.5%	26.2%	18.0%	21.3%	100.0%
	Low-D	Count	42	35	60	35	172

		% within Students Positions	24.4%	20.3%	34.9%	20.4%	100.0%
	Middle-A	Count	15	17	35	63	130
		% within Students Positions	11.5%	13.1%	26.9%	48.5%	100.0%
	Middle-B	Count	7	16	30	28	81
		% within Students Positions	8.6%	19.8%	37.0%	34.6%	100.0%
	Middle-C	Count	19	22	24	14	79
		% within Students Positions	24.1%	27.8%	30.4%	17.7%	100.0%
	Middle-D	Count	35	41	29	37	142
		% within Students Positions	24.6%	28.8%	20.4%	26.1%	100.0%
Total	Count		193	244	406	486	1329
	% within Students Positions		14.5%	18.4%	30.5%	36.6%	100.0%

Table C-32

Students Positions * You feel more comfortable with architectural environment as compare to 1st year?							
Crosstabulation							
			Not at all	Slightly	Moderately	Strongly	Total
Students Positions (Minus First Year)	High-A	Count	7	15	62	155	239
		% within Students Positions	2.9%	6.3%	25.9%	64.9%	100.0%
	High-B	Count	3	11	15	28	57
		% within Students Positions	5.3%	19.3%	26.3%	49.1%	100.0%
	High-C	Count	13	14	21	68	116
		% within Students Positions	11.2%	12.1%	18.1%	58.6%	100.0%
	High-D	Count	4	8	28	38	78
		% within Students Positions	5.1%	10.3%	35.9%	48.7%	100.0%
	Low-A	Count	9	14	18	16	57
		% within Students Positions	15.8%	24.6%	31.6%	28.1%	100.0%
	Low-B	Count	13	20	26	35	94
		% within Students Positions	13.8%	21.3%	27.6%	37.2%	100.0%
Low-C	Count	6	10	33	12	61	

		% within Students Positions	10.7%	16.4%	52.5%	20.5%	100.0%
Low-D	Count		24	31	39	54	148
	% within Students Positions		16.9%	20.9%	26.4%	35.5%	100.0%
Middle-A	Count		10	11	43	65	129
	% within Students Positions		7.8%	8.5%	33.3%	50.4%	100.0%
Middle-B	Count		10	18	23	29	80
	% within Students Positions		12.5%	22.5%	28.7%	36.3%	100.0%
Middle-C	Count		17	13	21	28	79
	% within Students Positions		21.5%	16.5%	26.6%	35.4%	100.0%
Middle-D	Count		13	14	53	41	121
	% within Students Positions		10.7%	11.6%	43.8%	33.9%	100.0%
Total	Count		129	179	382	569	1260
	% within minus 1st year		10.2%	14.2%	30.3%	45.2%	100.0%

Table C-33

Appendix D

Defining Students' Habitus Groups

Student number	Cultural Capital Group	Early Education			Impact of Parents'			Hobbies and Activities				World View			Perception of Profession					Habitus Group
		Art & Culture activities	Critical Skills	Satisfaction	Education & Profession	Views about Education	Impact of Parents' Views	Hobbies	Book Reading	Music	Free Time	Social Interactions	Travelling	Life Goals	First Choice	Why Architecture	Perception before joining	Choice of unl.	Plans after Graduation	
1	High	1	1	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	Cultivated
2	Middle	3	1	2	1	2	1	3	2	1	2	2	1	1	2	2	2	1	1	Mezzo
3	High	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	Cultivated
4	Middle	2	1	1	2	2	1	1	1	1	1	2	1	1	2	1	1	1	1	Mezzo
5	High	1	1	1	1	1	1	2	1	1	2	2	1	1	2	2	1	1	1	Cultivated
6	Middle	3	2	1	2	2	1	3	2	2	1	2	1	2	1	2	2	2	2	Mezzo
7	High	1	1	1	2	1	1	2	1	2	2	1	1	2	2	1	1	1	1	Cultivated
8	Low	3	3	3	3	3	3	2	3	2	2	2	2	2	1	2	3	3	3	Oblivious
9	High	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	Cultivated
10	High	1	1	2	1	1	1	1	1	1	1	2	1	1	2	1	1	1	1	Cultivated
11	High	2	2	1	2	1	1	3	1	1	2	3	1	1	1	1	1	1	1	Cultivated
12	High	1	2	1	1	1	1	1	3	2	1	2	1	1	1	1	1	1	2	Cultivated
13	Low	3	3	3	3	3	2	3	3	3	3	3	2	2	3	3	3	3	2	Oblivious
14	Low	3	3	0	2	3	1	3	3	3	3	3	2	3	2	3	3	3	2	Oblivious
15	Low	2	2	2	3	3	0	2	2	2	3	1	1	2	3	3	2	2	2	Mezzo
16	High	1	1	1	2	2	1	1	1	1	1	3	1	1	1	1	1	1	1	Cultivated
17	Middle	2	2	2	2	3	1	2	2	0	2	2	2	2	2	2	2	2	2	Mezzo
18	High	1	1	1	1	1	1	1	2	1	1	1	1	1	3	2	2	1	1	Cultivated
19	Middle	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	Mezzo
20	Low	3	2	2	3	3	3	2	3	2	3	3	3	3	3	3	2	3	3	Oblivious
21	Middle	3	3	2	3	3	0	2	3	2	3	3	3	3	3	2	3	3	3	Oblivious
22	Low	3	3	3	2	3	2	3	3	3	3	3	2	3	3	3	3	3	3	Oblivious
23	High	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	Mezzo
24	Low	3	3	0	3	2	2	3	0	3	3	3	3	3	3	3	3	3	3	Oblivious
25	High	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	2	1	1	Cultivated
26	Middle	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	Mezzo
27	Low	3	3	3	3	3	1	3	3	0	0	1	3	3	2	3	3	3	3	Oblivious
28	Middle	3	3	2	2	2	2	2	3	3	2	2	2	2	2	3	2	2	2	Mezzo
29	Low	3	3	3	3	3	3	3	3	0	3	3	3	3	3	2	2	3	3	Oblivious
30	Low	2	2	2	3	3	1	2	3	2	2	2	2	2	2	2	2	2	2	Mezzo
31	High	1	2	1	1	3	1	1	1	2	0	1	1	1	1	2	1	1	1	Cultivated
32	High	2	2	2	2	0	0	2	2	2	2	2	2	2	2	2	2	2	2	Mezzo
33	Middle	1	1	1	1	2	2	1	2	1	2	1	1	1	2	1	1	1	1	Cultivated
34	Middle	2	2	2	2	2	1	2	3	3	2	2	0	2	3	3	2	2	2	Mezzo
35	Low	3	3	2	3	3	2	3	3	3	3	2	3	3	3	3	3	3	2	Oblivious
36	Low	3	3	1	2	2	1	3	3	0	3	3	3	3	3	3	3	3	3	Oblivious
37	Middle	3	0	2	2	2	2	2	2	2	1	2	2	2	3	2	2	2	2	Mezzo
38	Low	3	3	3	3	3	3	3	3	0	3	3	3	3	3	3	3	3	2	Oblivious
39	Middle	3	3	1	2	2	2	2	2	2	2	1	1	2	2	2	2	2	2	Mezzo
40	Low	2	3	2	2	2	2	2	2	3	2	2	1	1	2	2	2	2	2	Mezzo
41	Middle	3	0	3	3	2	2	3	3	3	3	3	3	3	3	3	3	3	1	Oblivious
42	Middle	3	3	3	2	3	0	3	3	3	3	3	3	3	3	3	3	2	3	Oblivious
43	Low	3	3	3	0	0	0	3	2	3	3	3	3	3	3	3	2	3	3	Oblivious
44	Middle	2	0	2	2	3	1	2	2	2	1	2	3	2	2	2	2	2	2	Mezzo

Table D-1

Motivation

<p>Did you come to Architecture by Choice? <i>One of my uncle and aunt are architect, I am especially very close with my uncle, my father's brother and I used to discuss with him what architecture is about so I had an idea what architects do and I always found it very interesting. (Student No. 32)</i></p>	<p>Intrinsic Motivation</p>
<p><i>I decided to join architecture in 8th class when I was studying physics and mathematics, I used to have arts in my free time as a hobby but never as a subject. I actually liked architecture because it is not just pure art, it has a good balance of arts and science so it seemed like a good option. (Student No. 12)</i></p>	
<p><i>After FSc. exams me and my friends discussed what are the options for us to pursue and we did some research, then I came across architecture and I thought it can be a good profession for me. (Student No. 23)</i></p>	<p>Achieving Motivation</p>
<p><i>There is a person in my family, not very close but from extended family, he is quite young still he is well established, he in on his own foot without his family's support. So I thought if he is doing good I can too, I mean I have better early education then him and a lot more exposure so I should do better than him. That is why I came to architecture. (Student No. 3)</i></p>	
<p><i>I had no idea about architecture, I wanted to go to medicine as my parents always told me I should. But then I had to leave biology because of my bad progress in it, then a neighbor told me about architecture. (Student No. 17)</i></p>	<p>Extrinsic Motivation</p>
<p><i>At the time of admission, I put architecture I think at 4th position in the order of preferences, just to be on safe side I put in as many options as possible. I never thought that I will actually end up here. (Student No. 43)</i></p>	

Table D-2

<p>What is your first instinct to do when taking up a new project?</p>	
<p><i>We see and read about so many projects and things on internet and books that our brain starts having complicated ideas about things and then from those ideas inspirations comes. I think project brief is the one thing that starts the thinking process and then you keep on thinking what you are going to do in the project, while going home in bus or while watching tv maybe, the thinking process never stops. I think the inspiration doesn't comes from 1 day of learning. (Student No. 10)</i></p>	<p>Intrinsic Motivation</p>
<p><i>I think the inspiration doesn't comes from 1 day of learning, 16 years of education has built my mind in a certain way and because of it I think in a certain manner, this whole thought</i></p>	

<i>process in the mind helps me develop complicated thoughts and ideas and produce designs. (Student No. 6)</i>	
<i>The first thing to do would be to research about the project and understand what is required from us and then the next step is to discuss with teachers about the project. (Student No. 4)</i>	Achieving Motivation
<i>I try to understand the project brief provided by teachers, then I try to research about similar projects, site visits are also important, all of these things develop an understanding of the project. (Student No. 23)</i>	
<i>I try to understand what teachers are saying, sometimes the difficulty I face is that teachers talk in a very philosophical manner. A lot of time I don't even understand what they are saying, so I try to understand the small tasks, sometimes with the help of my friends. (Student No. 8)</i>	Extrinsic Motivation
<i>In the beginning it is very difficult to grasp the new ideas and to understand the whole project. So, I try not to overwhelm myself, I try to focus on weekly tasks and try to follow teachers guidelines each week. (Student No. 37)</i>	

Table D-3

Do you enjoy working on the design projects?	
<i>Designing is fun. You put on music, brainstorm, sketch, draft and see the ideas coming to life. I think this is the best part of architecture. (Student No. 11)</i>	Intrinsic Motivation
<i>Designing itself is a lot of fun, the only problem is the time pressure associated with it. (Student No. 27)</i>	
<i>In the beginning I didn't use to enjoy it, especially in the first year when it was even difficult to make sense of what teachers are saying. But now it is an interesting thing for me. (Student No. 8)</i>	Achieving Motivation
<i>It is certainly a complicated and long process, but over the time I have learnt to enjoy it. (Student No. 6)</i>	
<i>I don't think I really enjoy the designing part, but I like working on group projects. I think it becomes easier for me when I don't have to worry about every aspect of project. (Student No. 17)</i>	Extrinsic Motivation
<i>I don't enjoy it a lot, I know some of my class fellows do. I am always under pressure of work. My parents even ask me I should leave architecture, my health is been affected by so much work pressure. (Student No. 15)</i>	

Table D-4

Reflection

Do you try to understand or question what you have learnt from a particular design project?	
<i>I use to feel that we were not doing so much, although I know it was the foundation year and they were introducing us to the concepts of art and design and making us to think critically but still I felt that we didn't do much, it should have been more challenging I think. (Student No. 5)</i>	Yes, I question the purpose of

<i>Yes, when we started proper architectural design in 3rd semester, I started enjoying the work and now in 3rd year I feel like we are doing something serious and learning something good. (Student No. 24)</i>	a project and what I have learnt from it.
<i>I try to understand what teachers are explaining about the project and what we are expected to design. (Student No. 41)</i>	I am trying to understand the whole process.
<i>In the first semester I was very confused about what we are doing, I was doing the assignments given to me and completing the weekly tasks, but I couldn't see the big picture of what architecture is about, I think I am slowly learning, now I mostly understand the purpose of project or at least I ask questions. (Student No. 7)</i>	
<i>I never thought about it, I think teachers design the projects so that we can learn from it without worrying too much about what we are learning. (Student No. 17)</i>	Never thought about it
<i>No I never thought about it. (Student No. 20)</i>	

Table D-5

Do you think about your strengths that might be helping you in learning architecture?	
<i>Because I always deliver good, and my communication skills and English-speaking skills are good, so teachers get impressed. And also, I do a lot of work but whatever I do I have string reasoning and thought process behind it, so I do have a lot to say about it as well. My friends often say that you are confident, but that is how I am. (Student No. 10)</i>	Yes, I do.
<i>There are a lot of things that are difficult or hard to cope with in the beginning but I am always excited about them, I am never overwhelmed by them in negative sense. (Student No. 9)</i>	
<i>I have learnt to adapt to the learning environment of architecture in 3rd year now, I know now how to manage the workload and take project forward but I think I have learnt this the hard way. (Student No. 19)</i>	I think I am developing some strengths with time.
<i>I didn't think I'll have to do so much effort to learn to design, that how difficult it is to come up with one original idea and how much I have to learn to be able to design one single house. But I think I am learning with time that I am good in practical aspects of design so I should stick to it. (Student No. 24)</i>	
<i>No, I never thought about it. (Student No. 13)</i>	Never thought about it.
<i>I think excelling in architecture is about putting effort, I do not really think about what strengths are helping me to work. But on the other hand, I have seen people putting a lot of effort and still not performing well, I do not know, never really thought about it. (Student No. 40)</i>	

Table D-6

What have you found most difficult in learning architecture?	
<i>Sometimes it is bit too much as the hours are too long. And when there is submission deadlines then amount of work is insane. Even parents start saying that why did you choose this field, it doesn't make sense to work this much. (Student No. 12)</i>	Long working hours

<i>I used to feel that as I have so much interest in architecture, I will join the school sit in the studio and new ideas will come to me automatically but that did not happen of course. Bu after coming here I realized it is such a long and time taking process. (Student No. 11)</i>	
<i>I think it is very important, I have seen people in class who have done very good work at times but they cannot explain their projects well enough and that is why they do not get enough credit, and also these students are given much hard time by the jurors. (Student No. 26)</i>	Design Juries
<i>Juries are very stressful time majorly because we have to do a lot of work for the submissions, and prepare for presentations. But also having to present the work is stressful as well. (Student No. 39)</i>	
<i>I think nothing is clear in design, what is required of us, what we should do, it's never obvious, it feels like decoding some hidden messages in teachers' lectures. (Student No. 8)</i>	Trying to understand how to start a new design project
<i>There have been some dark moments when I was not feeling very good about myself and my progress in architecture but I was mentally prepared for this because when I was signing up for this field I knew what I am signing up for. (Student No. 18)</i>	
<i>I think the most difficult thing was communication with class fellow, students will start discussing things in English and I will be just sitting there and listening to them as I am not good in English communication so I used to be hesitant in saying my point of view in Urdu, as I used to feel that I will look very uncool. (Student No. 30)</i>	Requirement of social interaction
<i>We have to work on group projects and spend a lot of time with class fellows, I am not a very social person, so I struggle with this. In the beginning I didn't even use to understand how to be part of a group. (Student No. 21)</i>	
<i>Never thought about it. (Student No. 44)</i>	Never thought about it.
<i>There are many things, I cant really think of any one thing. Maybe I didn't give it much thought. (Student No. 14)</i>	

Table D-7

Learning Perception

What was your perception of architecture before joining the school?	
<i>Most of my fellow students think that architectural learning is very difficult because they came with this perception that architecture is a kind of art and they will be learning it like an art profession but I always knew that it is a very serious profession and not like fine arts it is very technical and complex with a focus on both arts and technical aspects. (Student No. 2)</i>	A very complicated profession with focus on both arts and sciences
<i>Everyone warned me about it, when I was doing my research for coming here that this profession requires a lot of time, physical effort and commitment so I was kind of mentally prepared for it. I knew it is very technical field but at the same time you get to explore the society and culture, that is why I was attracted to it. (Student No. 9)</i>	

<i>I used to get impressed by beautifully rendered images and beautiful elevations, I wanted to do that. That is why I joined architecture; it is only after joining I am understanding that architecture is much more than making pretty looking buildings. (Student No. 24)</i>	Creative field, similar to other art fields.
<i>I didn't have much clear perception about the field before joining, I just wanted to join a profession that has art and I can enjoy myself there. (Student No. 31)</i>	
<i>I used to think it was a branch of civil engineering. A lot of mathematics will be involved in architecture and we will make building designs with mathematical formulas. (Student No. 42)</i>	Will be very technical like similar to engineering fields.
<i>when I joined architecture, I had an assumption that it is a type of engineering. It would be something related to mathematics, I think I understand it in third semester that architecture in applied art and, what applied art means. (Student No. 15)</i>	
<i>I used to think that I have studied and worked really hard in FSc and now architecture is going to be much easier, I'll not have to work that hard or study that much. (Student No. 40)</i>	Will be easy. At least will not have to study a lot.
<i>I used to think that I will be designing buildings and there will not be a lot of work to do. (Student No. 14)</i>	

Table D-8

How can you describe your learning experience in the school so far?	
<i>I was quite excited, I knew that I have entered in a very vast field and now it is going to open up to me slowly and gradually, I had the feeling that I am going to be part of something very big like I am going to be the successor of Norman Foster or Zaha Hadid. (Student No. 1)</i>	Having fun in learning.
<i>I liked that in architecture things are not hypothetical, you get the chance to do the practical work and see something getting made by your hands. (Student No. 26)</i>	
<i>In the beginning I wasn't understanding much, I was just trying to follow teacher's instructions as closely as I can and completing tasks. Never understood the big picture of why I am doing what I am doing. But then gradually my perspective seeing things have changed, now I try to see meaning of things in deeper manner. (Student No. 32)</i>	Trying to understand and things started making sense with time.
<i>It was good, nothing overwhelming, teachers introduced us to some basic concepts of drawing, they introduced us to the gadgets we are going to use in architecture, materials of building. And I was expecting that things will become a little difficult over time and they did, but I was prepared for it. (Student No. 30)</i>	
<i>In the beginning the tasks and assignments we were having were making no sense at all, we used to think that we will start designing buildings from the beginning and we came here they asked to us cut papers and make formats and models out of it which made no sense at all. It was almost frustrating. (Student No. 13)</i>	Completely confused, thinking of leaving architecture.
<i>In the beginning few weeks I was very confused, as I use to think that in architecture the real job is to work on software and make drawings for buildings then why my teachers are asking me to make simple paper</i>	

<i>motives and models, I used to feel that I am wasting time. (Student No. 39)</i>	
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Table D-9

How perception has changed with time spent in the school?	
<i>I think I am learning a lot being here and I have become very comfortable with the city after coming to IVS because this school makes you see Karachi in a completely different way and it changes your perspective about the city. It kind of open up your mind about the city and its people in a way that you start understanding everything and feeling things are very normal. (Student No. 9)</i>	Perception of field and Requirements of Learning have become clearer.
<i>After coming to architecture, I have realised that it is a much vast field then I initially realised and there is a lot to learn and a lot to give back to society as an architect. (Student No. 1)</i>	
<i>I think the first two years for me just passed away figuring out what works best for me, how do I approach the design, now I know much better that what is my process, what are my strengths and how I can use them. In the beginning I did not know and I was struggling. (Student No. 31)</i>	It has been difficult but now perception changed completely
<i>Particularly for a person like me who is coming from a small town, architecture gives the opportunity of expanding your mind, it makes us actually see things. We are trained here to critically analyze things and to question everything around us and that I think changes our perspective towards life entirely. (Student No. 13)</i>	
<i>Teachers ask us to think critically to have deep concepts behind design process, I still find such concepts difficult to comprehend. I do not know what thinking critically means. (Student No. 35)</i>	Did not experience much change/ Still struggling to understand.
<i>I never used to understand what teachers want. Sometime they explain an assignment and I will make it thinking that I have done good job but when I show it to teachers they would ask for something more innovative and creative and I would be thinking how I make it creative, I already have done my best, what else I should do. (Student No. 17)</i>	

Table D-10

Learning Context

How important is teacher’s guidance for learning in the design studio?	
<i>I think one mistake students make when presenting in front of jurors is that they don’t care what your teachers said to you so you cannot present it as an argument and when you have produced your work only by following teachers instructions you cannot defend it in front of external jurors. You need to balance your own thoughts with what teachers have told you and when you have done that you can easily and confidently present your work. (Student No. 6)</i>	Cannot follow teachers blindly, one need to make decisions.

<p><i>I'll be honest with you, they are teaching me what architecture is, about past and present of architecture but they haven't taught me about the field of architecture. What practicing architecture is like, what the field or profession is about, what I will be supposed to do when I graduate, under all these theories and great ideas and architects what the profession is about. The architecture we read about is maybe less than 1 percent of architecture in the entire world then what the rest of architecture is about and what is practicing it means in a society like Pakistan. I don't think university is contributing enough to train me like a practicing architect. (Student No. 5)</i></p>	<p>Question teachers.</p>
<p><i>Some teachers are very much focused on the practical aspect of the design and some others more focused on the subjective nature of, and I think they are both important. Teachers know what they are doing of course. (Student No. 40)</i></p>	<p>Important to follow their guidance for better grades.</p>
<p><i>In the beginning I never understood what teachers were explaining and what they wanted me to do, but I went to teachers and talk to them, I told them that I am not understanding what I am supposed to do and they guided me for each step. I just started following their guidelines and when I produced assignments and teachers liked them, and I got good grades, then I started building up confidence that I can do it. (Student No. 22)</i></p>	
<p><i>The most problematic thing is teachers never tell us what they actually want, they explain things very vaguely and when you make some design or some project they would tell you that this is not something they want, why didn't they tell in advance that what they want this is very confusing part of learning architecture. Many times it happens that we have spent so much time on something and tried to do our best and feel like we have done good job but next day teacher will see it and say this is all rubbish, it gets very frustrating at times. (Student No. 42)</i></p>	<p>Teachers' guidance is extremely important and need to be followed</p>
<p><i>I think everything I have been able to do up till now and everything I have learnt in architecture is because of my teachers' guidelines and instructions. I am very comfortable with them now, I go to them and discuss with them any problem or difficulty I am having. They not only guide me about design but also about how to survive in this school. (Student No. 27)</i></p>	

Table D-11

<p>What is your opinion about the requirement of social interaction with fellow students?</p>	
<p><i>Because of the vertical studio, we always at least know the students above and below year. I think it is a very good practice; we learn a lot from these interactions. (Student No. 1)</i></p>	<p>Its good, we get to learn a lot by social interactions.</p> <p>It is difficult, one has to</p>
<p><i>It is good to have someone to talk to; I have good friends in the hostel who help me to learn. (Student No. 9)</i></p>	
<p><i>It was not easy for someone like me to talk to girls, I have never studied with girls my whole life, and the only women I ever talked to, were the</i></p>	

<i>women of my house. Here people interact without thinking about gender, I had to overcome my shyness to be able to work with girls, initially people around me use to make fun of this issue. (Student No. 19)</i>	overcome issues for proper social interactions.
<i>I prefer to hang out with fellow students from Sialkot (A small city), I think students from Lahore (where university is located) are different and maybe mean as well, I do not feel comfortable with them. (Student No. 21)</i>	
<i>Our generation have this bad habit that we waste too much time in making friends and relying on them for assignments and work, I think we need to take responsibility and be focused on our studies. (Student No. 38)</i>	It is a waste of time
<i>I think we have so much work in architecture that we do not have time to spend on social interactions or to think about developing professional relations. (Student No. 22)</i>	

Table D-12

What is your opinion about the requirement of presenting and defending your work?	
<i>Because I speak a lot I think I am successful in juries and presentations. Because you know whatever you produce a room or a complex of buildings you should be able to sell it. You should be able to show the thought process behind it and give reason behind everything otherwise people will not get impressed by it. Sometime some jurors are just stubborn and just won't agree with you point of view but they will still appreciate that you are defending your design passionately. Because when I feel I have done good work I will argue as much as I can, and I think it is a good learning experience, it gives me confidence. (Student No. 7)</i>	It is a good learning and social experiences
<i>I used to hesitate in speaking English because we didn't used to speak English casually in school but we learnt our education in English throughout so I had good command on the language I just needed to have a bit of practice. Having to talk in English in juries have given me the chance to practice and gain confidence, my communication skills have improved a lot. (Student No. 12)</i>	
<i>It is difficult to communicate about architecture, like we have to show the design and try to convince that it is very good and for that you have to have confidence in your own ideas and it's not always easy to do. (Student No. 24)</i>	It is tough, require a lot of preparation.
<i>It is very difficult, I am always scared of presenting in front of people. I never know how to talk about my concepts and design, I cannot say what I want to say and something else would come out of my mouth and then I will get worried that I have said wrong things. (Student No. 31)</i>	
<i>Architecture is probably the only profession where you are being judged and marked on how well you can communicate your ideas and convince others of your project. You have to sell yourself and your work, you have to convince people and you are being scrutinized in ways that does not exist in other professions. (Student No. 16)</i>	It is not fair being judged by your speaking abilities/ a
<i>I think it is very tough and somewhat unfair, I have seen people in class who have done very good work at times but they cannot explain their</i>	

<i>projects well enough and that is why they do not get enough credit, and also these students are given much hard time by the jurors. Also some students who probably have not produced very good work but their communication skills is very good so they get the benefit of that and often they get better grades. (Student No. 36)</i>	terrifying experience
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Table D-13

Learning Conception

How useful you have found the previous education in learning architecture?	
<i>I think that A-levels education has prepared me a lot for learning architecture because it has trained to be critical and to think and act. (Student No. 37)</i>	Helping a lot because it has trained me to think critically and gave me confidence.
<i>I was trained to speak well in school as we used to have a lot of debate competitions, I have always found it useful here, especially when presenting my work in front of an audience. (Student No. 7)</i>	Helping a lot because it has trained me to think critically and gave me confidence.
<i>I do not think it is helping a lot, not directly any way. But it is also true that without that education we probably not have been able to understand architecture as well, the pure sciences we learned previously are not directly implemented in architecture but it helps us to understand the world and have inspirations and to just be in the state of mind where we can understand complex concepts. (Student No. 34)</i>	Not helping directly but all those years of studying prepared for higher education in general/ only few subjects are helping.
<i>The concepts we learned in Mathematics sometimes help in trying to learn the technical aspects of architecture like structure calculations or HVAC but other than that I think early education we had is not having a direct impact on learning architecture. (Student No. 16)</i>	Not helping directly but all those years of studying prepared for higher education in general/ only few subjects are helping.
<i>I have been never asked to think critically and give my own opinions about something then how I am supposed to develop an opinion. And now here teachers expect us to analyze buildings and world around us and draw inspirations from it, I know I am supposed to do this I just don't know how. (Student No. 30)</i>	Architectural Education is very different from anything I have learnt before, so it is not helping at all.
<i>No not at all, I think I have wasted all those years by studying so hard and getting higher marks, I could have learnt some simpler subjects like arts and that would have helped me in learning architecture. (Student No. 39)</i>	Architectural Education is very different from anything I have learnt before, so it is not helping at all.

Table D-14

Learning Allied Subjects

How useful you have found other subjects (other than design studio) in learning architecture?	
<i>I think most of them are helpful, as we cannot design in vacuum, and the information we get under different subject areas help us to learn the theory of design. (Student No. 4)</i>	Very helpful

<i>I think they are very important we cannot really design a good project without it being structurally sound and without proper understanding of how it is going to be constructed. Also, history and theory subjects help us to understand the architecture of the world and our concepts for projects are developed from this. I think all subjects are equally important in learning design. (Student No. 26)</i>	
<i>Sometimes when we are stuck in design problems something comes to mind that we learnt in any other subject and it will give new direction to our thinking process. (Student No. 41)</i>	Sometimes helpful for a specific task.
<i>I think materials and construction and also structures is very important to learn architecture, a lot of time I have seen in the studios that students design their whole projects but they do not think about the materials and structure constraints but in actual when you go out to design something, it needs to be built as well and that is why it needs to be designed based upon keeping the tectonic strategies in consideration, so these strategies needs to be incorporated in the design as well. (Student No. 28)</i>	
<i>I do not find these subjects very helpful, some of them are very difficult and they teach us those subjects but never make it clear how to us it in our design projects so I am not sure about this. I think teachers need to guide more on the practical use of what we are learning in other subject areas. (Student No. 17)</i>	Not helpful
<i>I think these subjects are not very helpful in design studio, we only study them for the purpose of passing the exams. (Student No. 29)</i>	

Table D-15

How often do you take inspiration or embed the concepts learnt in other subjects in your design projects?	
<i>I particularly enjoy history, most of my design inspirations come from there. Technology is a dry part of architecture I feel but it is very important of course, so although it doesn't come to me naturally I always try to incorporate the structural and materials aspect of building into design as much as time and my own understanding of these aspects allow me. (Student No. 4)</i>	I always try
<i>I always try to incorporate the aspects I have learnt in these subject areas into my design because design is not complete without the practical aspects. (Student No. 33)</i>	
<i>Most of the time we only try to follow teachers' guidance as we know that they are going to mark our projects and if they require that we need to implement structures or certain concepts from history lessons we will try to do it. But I have never tried to incorporate the concepts I have learnt in other subjects in my design projects on my own. I am not sure I even remember them after exams. (Student No. 25)</i>	When teacher specifically ask for it.
<i>If teachers demand us to incorporate certain theory from some subject area, we do that but on our own I don't think anyone thinks about implementing the concepts we learn in history or structures. (Student No. 13)</i>	

<p><i>I am not sure about that, I mean all the subjects I have been in the school were interesting and learnt something from them but I don't think I have implemented that much in my design development. (Student No. 27)</i></p>	<p>Never</p>
<p><i>Not all of them are actually helpful, also I think the problem is that they are not being taught in a very practical manner, so we don't know how to use them in design. (Student No. 43)</i></p>	

Table D-16

Mapped responses of each student's Learning Approach from different habitus groups

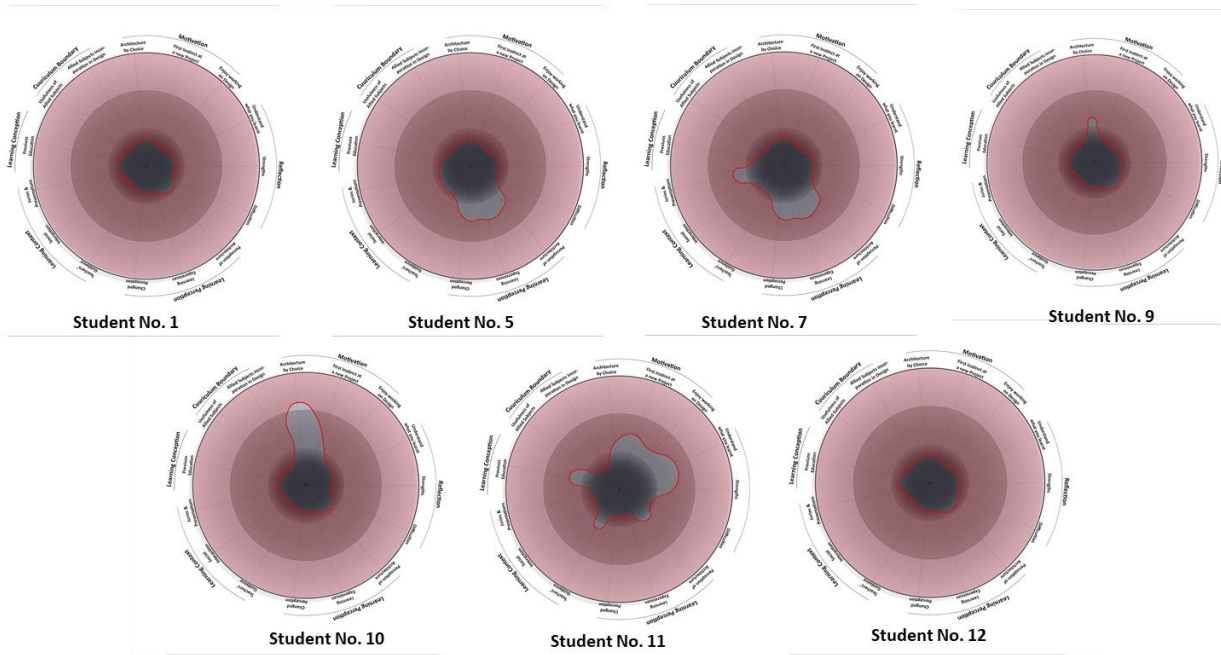


Figure D-1: Students with Deep learning approaches from Cultivated habitus group

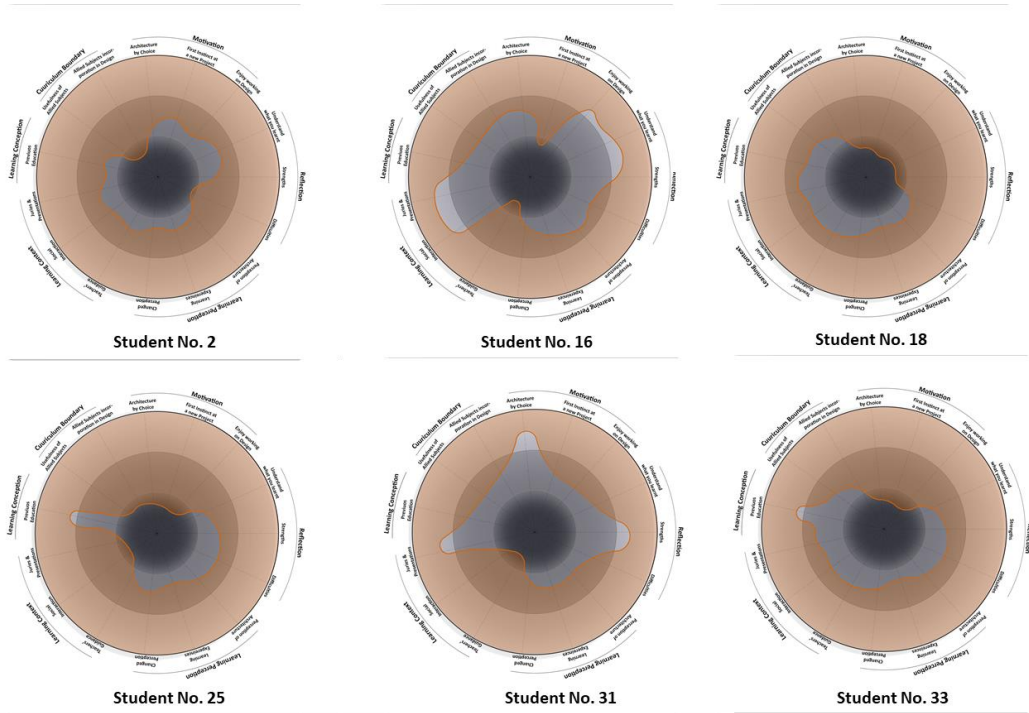


Figure D-2: Students with Strategic learning approaches from Cultivated habitus group

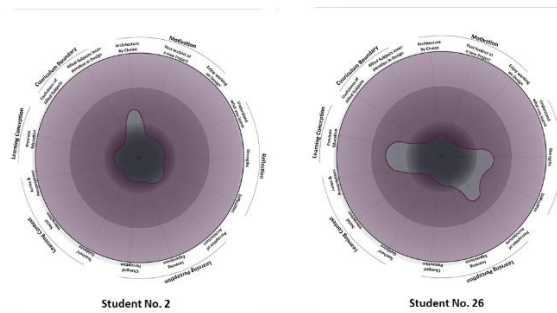


Figure D-3: Students with Deep learning approaches from Mezzo habitus group

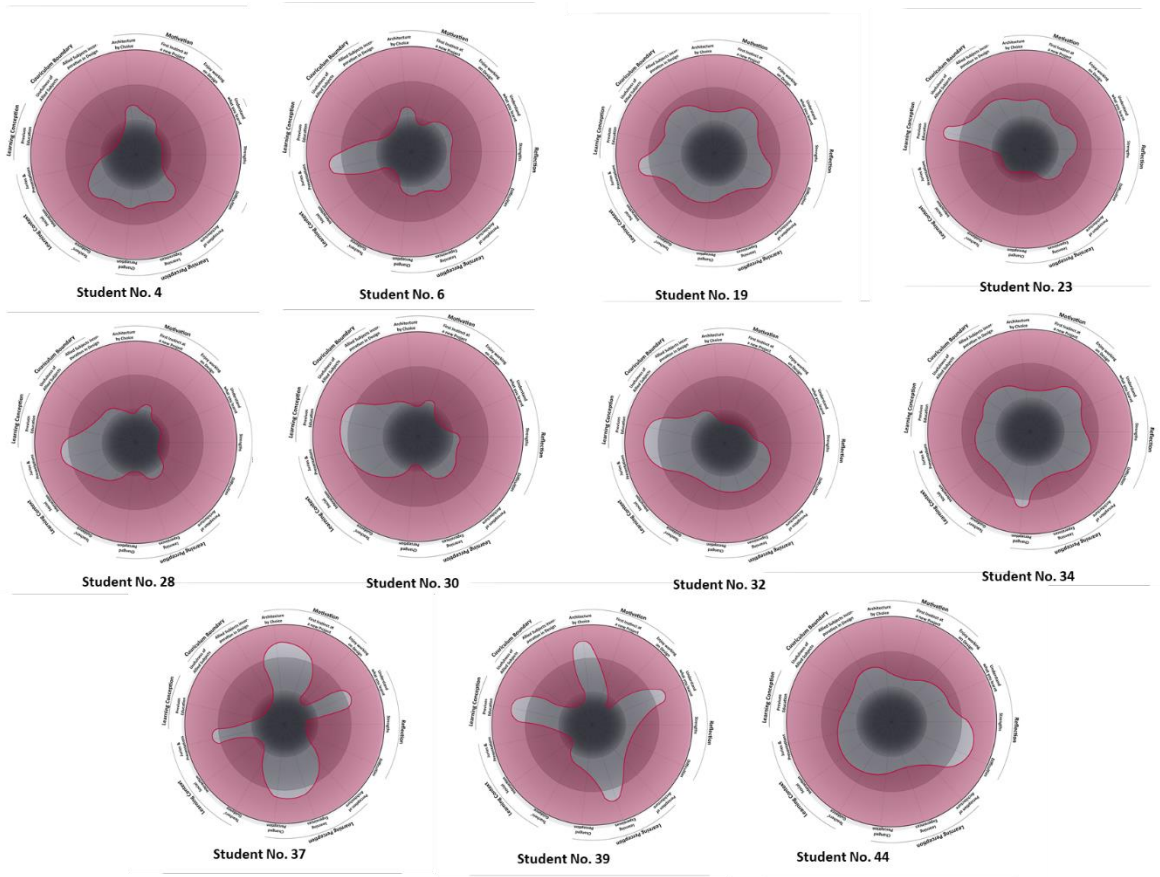


Figure D-4: Students with Strategic learning approaches from Mezzo habitus group

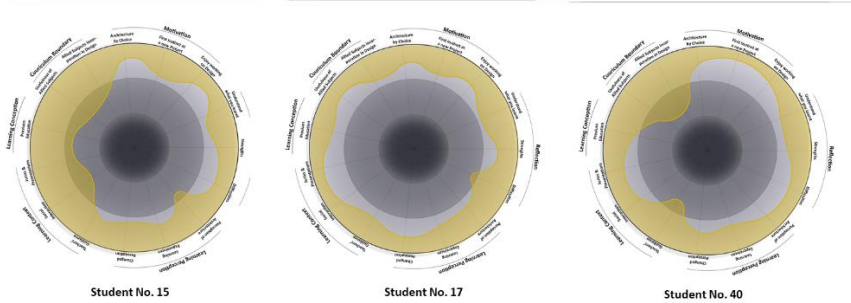


Figure D-5: Students with Surface learning approaches from Mezzo habitus group

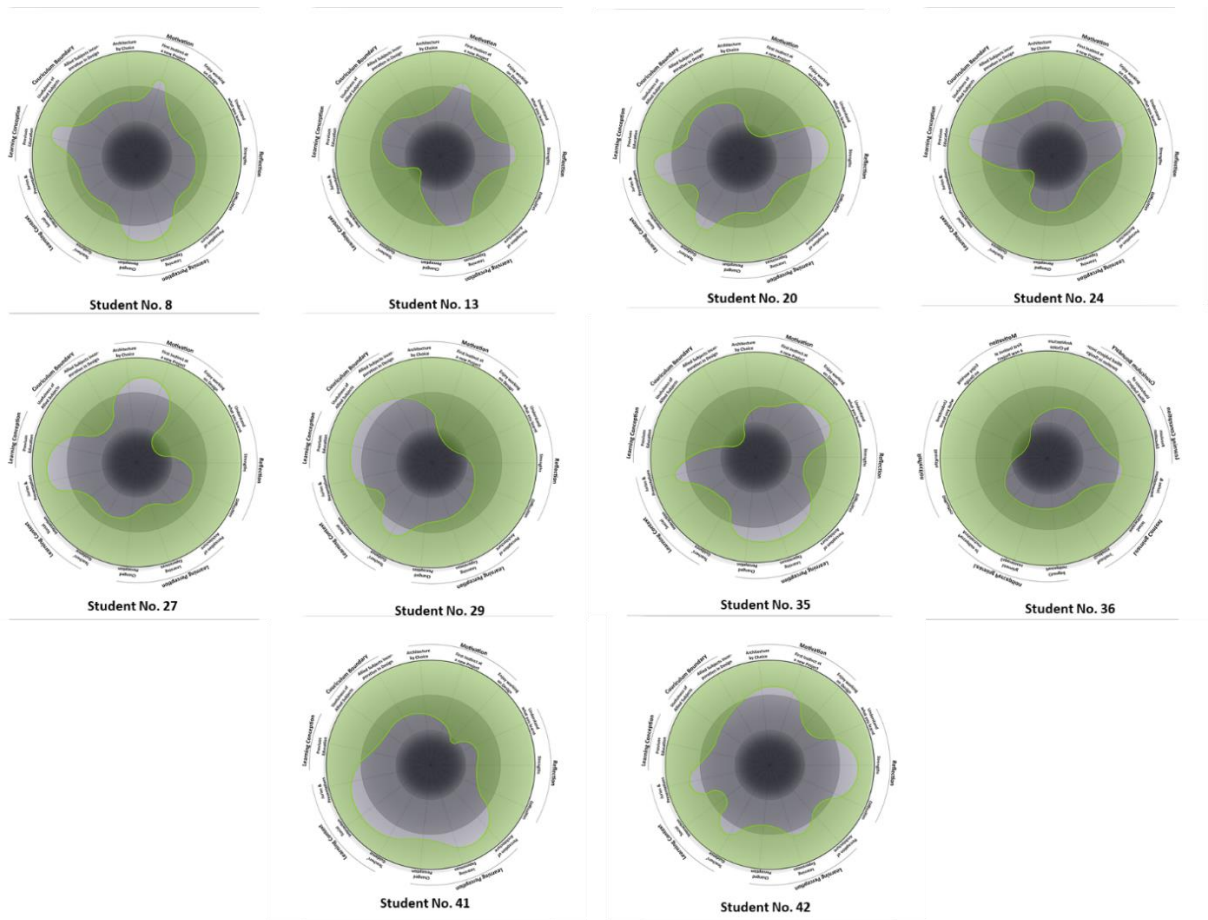


Figure D-6: Students with Strategic learning approaches from Oblivious habitus group

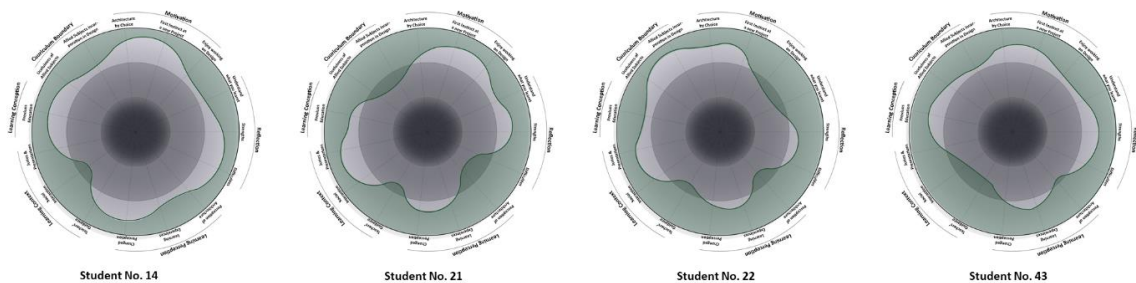


Figure D-7: Students with Surface learning approaches from Oblivious habitus gr

